City of Santa Barbara
California

PLANNING COMMISSION
STAFF REPORT

REPORT DATE: November 22, 2011

AGENDA DATE: December 1, 2011

PROJECT ADDRESS: 1100, 1201 and 1335 Shoreline Drive (MST# 2009-00495)
Shoreline Park Safety Improvement Project

TO: Planning Commission

FROM: Planning Division, (805) 564-5470
Danny Kato, Senior Planner
Jan Hubbell, AICP, Parks Project Manager

I. BACKGROUND

Shoreline Park was constructed in 1967 and is subject to periodic coastal bluff erosion and landslides. In January 2008, there was a substantial landslide near the easterly restrooms. Temporary fencing was installed inland of the landslide while city staff determined the extent of the landslide and where a new fence and sidewalk could be located. Additionally, around the same time, city staff became concerned about cracks in the walls at MacGillivray Point. The geologist reviewing the landslide was asked to analyze geologic concerns at the point as well. The purpose of the Shoreline Park Safety Improvement Project is to install permanent improvements required as a result of the 2008 landslide and to respond to safety concerns at MacGillivray Point and throughout the park. More discussion of the results of the geology reports is included below.

II. PROJECT DESCRIPTION

The Shoreline Park Safety Improvement Project consists of seven components: 1) Sidewalk and fencing replacement around the landslide area; 2) Fencing replacement and repair in some other areas of the park where fencing is in disrepair; 3) New fencing installation to restrict access at MacGillivray Point; 4) Bluff-top revegetation at the landslide; 5) Relocation of two park benches from MacGillivray Point to an area near the landslide; 6) Lighting replacement; and, 7) Informational sign replacement. Additional detail is provided below:

Slide Area and Fence and Sidewalk Replacement: The existing fence and sidewalk that were lost in the landslide will be replaced. Based on the geology report (Exhibit F), which identified a new Probable Top of Slope, the location for the replacement fencing and replacement sidewalk have been identified. The fencing will be connected to the existing fencing at each end and curve around the top of slope. The new four-foot tall fencing will have a PVC coating to reduce corrosion. Fence posts will be installed on eight-foot centers and will have concrete footings. The total length will be 240 linear feet. The sidewalk will sweep around the fencing in a parallel

curve, leaving a buffer zone between it and the fencing. There will be a couple of short concrete walks closer to the fence.

Bluff Top Fencing Replacement: Existing fencing will be replaced in locations that park users climb over or cut the fence to gain access to the bluff top for both illegal viewing and camping. Additionally, the moist salt air has corroded the metal all the way through the structural elements of the framework in some places and those places will be repaired or replaced. The fencing replacement parts will have a PVC coating to reduce corrosion. Some fence repair locations will require new posts with concrete footings. About 1000 linear feet of fencing will be replaced, most of it in its current location. In one location about 80 feet east of the east parking lot, it will be moved further from the bluff edge due to bluff retreat and the existing fence's close proximity to the existing Eucalyptus tree. Also, at the easterly restroom, the fence will be relocated to connect to the rear wall of the restroom. This will minimize people hiding behind the building.

MacGillivray Point Safety Fencing Installation:

The Parks and Recreation Department considered several options at MacGillivray Point. Based on the 2009 geologic report (Exhibit G), a follow-up assessment by the geologist in 2011, and review by the City Attorney and the Risk Manager, it was determined that the potential risk to public safety required permanent closure of the area. It was also determined that removal of the existing wall and flag-stoned area would not be prudent, as it would be both expensive and potentially bluff damaging. In an effort to assess potential movement, the City Surveyor has been monitoring several points at this site since March of this year. At this time, although only two of the 10 points show any movement, and it is minimal, the Department believes the potential risk remains due to the potential for sudden catastrophic failure. Monitoring will continue quarterly through June 2012, so that the Department has two years of data and can determine the value on ongoing monitoring. Safety fencing will be installed to prevent park goers from accessing the bluff top lookout. The 57 linear feet of fencing will be connected to the existing fencing at each end, and will include a gate to allow park staff to enter for maintenance and survey reasons. Signage will be placed on the fence indicating the hazard potential and access prohibition. The existing benches will be removed by cutting off the tubular steel supports at ground level, and filling the remaining in-ground supports with concrete, if necessary. Similar to all other bluff top fencing, the new four-foot tall fencing will have a PVC coating to reduce corrosion. Fence posts will be installed on eight-foot centers and will have concrete footings.

Landscaping: The first planting location will cover 3000 square feet of the coastal bluff-top between the existing top of slope and the new relocated fencing. This area will be planted with native, drought-resistant plants. The plants in the first planting area were selected because they have a robust root system, are native to Southern California coastal bluffs, and do particularly well adjacent to the Pacific Ocean. These plants were planted at the Douglas Family Preserve in a similar setting and grew to the expected stature within nine months to a year. Additionally, the plants have been selected based on vigor, ease of maintenance, and the diversity of height, ranging from low to 48 inches or less. The planting will take place between January and March.

Once the planting has occurred, four inches of mulch will be placed on the bed to reduce evaporation.

The second planting area will cover 2500 square feet and will be between the proposed replacement fencing and the proposed replacement sidewalk, creating a buffer zone. This area will be planted with Santolina chamaecyparissus (Cotton lavender). This species was chosen because it is hardy and resists trampling by park users.

While the plants are being established, they will be hand-watered on a specific schedule for 18 weeks. After that time, the planting should be well established and would require no further watering.

Relocated Benches: The Parks and Recreation Department is proposing two new seating locations based on the layout of the replacement sidewalk and fencing near the landslide. The two new benches will be relocated from MacGillivray Point, will allow park goers new perspectives of the Pacific Ocean, and will also create a nice place to rest.

Lighting Replacement: The existing light fixtures need to be replaced due to excessive corrosion from the sea air, inadequate modifications to create light cut-offs, and the characteristics of the metal halide light bulb. Metal halide bulbs produce a significant amount of wasted light from the top and sides of the lens. Not only does this result in lower efficiency, it also contributes to "light pollution". LED lights feature directional characteristics, and can reduce night sky pollution. The narrow beam angle on LED lights provides illumination within the intended areas only. Not only will this reduce light pollution, but will also promote higher overall energy efficiency. The lights will be City standard.

New Signage: The Park has four interpretive signs (2 ½ feet x 1 ½ feet each), installed in collaboration with the National Oceanic and Atmospheric Administration (NOAA). These signs feature the Channel Islands and whale migration. They will be replaced because they are in poor condition and will be updated, in coordination with NOAA. One of the signs will be relocated from the top of the stairs to the new overlook established near the landslide. One new sign will also be installed near the landslide area. At least one of the signs will include information on coastal bluff geology.

III. REQUIRED APPLICATIONS

The discretionary application required for this project is a Coastal Development Permit (CDP20011-00012)to allow the proposed development in the Appealable Jurisdiction of the City's Coastal Zone (SBMC §28.45.009).

IV. RECOMMENDATION

The proposed project conforms to the City's Zoning and Building Ordinances and policies of the Local Coastal Plan. Therefore, Staff recommends that the Planning Commission approve the project, making the findings outlined in Section VII of this report, and subject to the conditions of approval in Exhibit A.

APPLICATION DEEMED COMPLETE: September 6, 2011
DATE ACTION REQUIRED: December 5, 2011

V. SITE INFORMATION AND PROJECT STATISTICS

Applicant:	City Parks and Recreation Department	Property Owner:	City of Santa Barbara
Parcel Number:	045-240-004	Lot Area:	13.2 acres
General Plan:	Neighborhood Park	Zoning:	P-R/S-D-3; Park and Recreation / Coastal Overlay
Existing Use:	Park	Topography:	Slight grade toward ocean on the bluff top
Adjacent Land Uses: North – Single-family Residential; South – Ocean; East – Ledbetter Beach; West – Single Family Residential			

VI. ZONING ORDINANCE CONSISTENCY

Standard	Requirement/ Allowance	Existing	Proposed
Setbacks			
-Front	20'	>20'	>20'
-Interior	10'	>10'	>10'
-Rear	10'	>10'	>10'
Parking	NA	107	107

Parking requirements for parks are determined by the city transportation engineer. Since there are no changes in park activities proposed, there is no need to provide additional parking. Lighting in parks is required to be directed away from nearby homes. The

current lighting "bleeds" both to the surrounding homes and into the night sky. The new lighting will be directed downward, away from both homes and the sky. The existing play area is well located to minimize noise impacts on the adjacent neighborhood and is in character with the park. No changes are proposed as part of the project. The proposed project would meet the requirements of the P-R/S-D-3, Park and Recreation/Coastal Overlay Zones.

VII. ISSUES

A. DESIGN REVIEW

The Architectural Board of Review (ABR) reviewed this project on November 16, 2009 (meeting minutes are attached as Exhibit D). On that date, the ABR stated that there should be a sign on the fence at MacGillivray Point, explaining why the viewpoint is closed; there should be a smoother transition from the existing to the proposed sidewalk; staff should study shrouding or replacing the restroom lights to reduce glare; staff should consider drainage improvements to reduce standing water; and appreciated the change in light fixtures.

The sidewalk transition has been redesigned. A small sign has been added to the plans at MacGillivray Point to explain that it is closed due to bluff safety concerns. The Parks and Recreation Department will be evaluating the need to upgrade Shoreline Drive storm drains and park drains as part of future infrastructure improvements for Shoreline Park. The City 6-year Capital Improvement Program includes these improvements, but funding has not yet been assigned.

B. COMPLIANCE WITH THE GENERAL PLAN AND LOCAL COASTAL PLAN

Land Use Element: Shoreline Park is in the East Mesa Neighborhood, which is bounded by Cliff Drive on the north, Meigs Road on the west, Oceano Avenue on the east and the ocean on the south. Shoreline Park is an important asset to this neighborhood and the City. The neighborhood discussion calls for preserving and, if possible, expanding Shoreline Park.

Open Space Element: Shoreline Park is an important open space in Santa Barbara. This project helps to preserve the park as an open space. One recommendation is to examine methods of cliff erosion. In this case, the Parks and Recreation Department is proposing to repair and replace fencing along the bluffs, using stronger chainlink that will be more difficult for people to break down to access the bluff. Limiting people's access to the bluff will both reduce erosion and increase safety for users.

Conservation Element: The Conservation Element calls out the shoreline, harbor, and waterfront areas as key aesthetic assets providing diverse recreation, including passive enjoyment of the scenic views. Shoreline Park is an important visual resource. This project will help preserve this visual resource and open space.

Seismic Safety/Safety Element: The Seismic Safety/Safety Element goals are to protect life, property, and public well-being, and to reduce or avoid adverse economic, social,

and environmental impacts caused by geologic hazards and conditions. The bluff along Shoreline Park is subject to landslides. There is an extensive discussion of sea cliff retreat in both the Seismic Safety-Safety Element and the Hazards section of the LCP. The coastal bluffs are subject to significant erosion due to a combination of factors, including wave action, wind and rain erosion, and composition of the geology. The bluffs at Shoreline Park (as in much of the city) are underlain by Monterey Shale formation. This formation is highly fractured and tends to slope toward the ocean, which increases its erosion potential. It is also layered with bentonite clay in seams ranging from as little as a half-inch to as much as several inches. This clay is very slippery when wet, which increases landslide potential.

The Seismic Safety-Safety Element, the Coastal Act, and the LCP generally prohibit development on the bluff face other than for public access to the beach and, in certain cases, drainage pipes. In order to protect development at the top of the bluff, the Coastal Act, the LCP and the city Seismic Safety/Safety Element prohibit most development within a 75-year bluff setback area. However, the park exists almost entirely within the 75-year bluff setback. No new significant structures are proposed. Shoreline Park is an important public park that provides coastal access to residents and visitors; therefore, the proposed development can be justified.

Geology Mapping Project - Preliminary Conclusions: landslides in late 1980s, 1995, 1998, and 2008 resulted in extensive loss of bluff and park use areas, due to sea cliff erosion, a dynamic function of coastal geology, ecology, and urban influence. Shoreline Park consists of Monterey formation bedrock that is overlain by Marine Terrace Deposits, softer layers subject to erosion that can destabilize harder layers of bedrock. Frank Kenton, a Certified Engineering Geologist, prepared reports and follow-up memos on both the landslide area and MacGillivray Point (Exhibits F and G). The conclusions are summarized as follows:

Active Landslide:

- The landslide is 120 feet wide and 60 feet long. Wave erosion continues to remove landslide material and results in continued slide mass movement.
- A second landslide is in the initial stages of formation on the east flank of the active landslide.
- There are a number of sea caves east of the landslide, which, over time, could contribute to future sea cliff erosion.
- A park restroom building is located above the sea caves and 26 feet from the top of slope. Future sea cliff erosion may require its removal and/or relocation.
- The Probable Future Top of Slope is 20 to 23 feet from the edge of the landslide.
- The 75-year bluff setback generally follows the southern edge of Shoreline Drive, adjacent to the sidewalk.

The fence at the active landslide area will be placed five feet inland from the Probable Future Top of Slope. The sidewalk will be 10 or more feet inland of the fence, resulting in 15 or more feet of distance between the sidewalk and the Probable Future Top of Slope and 35 or more feet from the current upper edge of the landslide.

MacGillivray Point

- The coastal bluff around the point has slowly eroded over time, leaving little remaining bluff at the edge of the lookout.
- Cracks in the low stone walls are likely to correspond to the location of a future landslide.
- Since a landslide in this area is likely to be sudden, a number of management options were recommended by the Geologist and were considered by the Parks and Recreation Department. These included: 1) closing the lookout indefinitely and installing a permanent chain link fence; 2) demolishing the look out and rebuilding a wall to commemorate Mayor MacGillivray; or 3) closing the lookout and monitoring the cracks to determine whether there is any change over time.
- Additional actions could include relocating the fence and sidewalk to the Probable Future Top of Slope, which is 17 to 23 feet from the existing top of slope, and monitoring movement at the point.

The Parks and Recreation Department is proposing a combination of options two and three above. The fence will be installed permanently, but there will also be ongoing monitoring. The fence at MacGillivray Point will be located at the Probable Future Top of Slope. As discussed above, bluff movement at MacGillivray Point is being monitored by the City Survey Crew. Several survey points have been established at the Point to determine movement. Initial surveys were carried out every two weeks; when no movement was found, surveys were changed to monthly checks; now, surveys are conducted quarterly. Over the past six to eight months, most survey points have shown no movement. There has been very minor movement at one of the points, amount to no more than 0.01 inches.

The Department is not proposing to demolish the lookout (option two) because there is potential to cause bluff movement by removing the materials, requiring substantial engineering to minimize the risk of bluff failure during demolition. Additionally, removing the lookout point would require more money than is available for the project.

Existing Slope: The Shoreline Park parcel has an estimated average slope of 13%, including the bluff. The proposed project area has an average slope of 0.05% west to east, and 0.005% north to south. The surrounding neighborhood north of the project area has a 6% average slope.

Local Coastal Plan: The primary LCP policy applicable to the project is related to hazards reduction and generally references to discussion in the Seismic Safety-Safety Element. Please see above discussion for further information.

California Coastal Act: Land Resources policy 30244 requires that development that could affect archaeological resources apply appropriate mitigation measures. David Stone of Dudek, Inc. prepared a Phase I Archaeological Study. It concluded that there was no potential for significant archaeological resources. The Historic Landmarks Commission accepted the report on August 3, 2011. A condition outlining what is required if such resources are unexpectedly found during construction is included in the Conditions of Approval.

Coastal Act Development Policy 30251 requires protection of the scenic and visual qualities of coastal areas. The existing four-foot tall fence appears to be 42 inches tall because of the amount of mulch that has been placed in the park over time. The new fencing will be the same height, although in many places it will appear taller. Because the new fence will not result in a substantial change to coastal views, the project is consistent with this policy.

Coastal Act Development Policy 30253 requires projects to minimize risks to life and property in areas of high geologic hazard. The policy also requires s projects to "assure stability and structural integrity, and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs." As discussed above under the Seismic Safety- Safety Element, the geological reports prepared by Mr. Kenton include recommendations about fence and sidewalk locations that will meet this policy. Additionally, the closure of MacGillivray Point minimizes risks to life and property as outlined in the geological report and memo.

C. ENVIRONMENTAL REVIEW

Staff has determined that the project is categorically exempt from further environmental review pursuant to California Environmental Quality Act Guidelines Section 15302 (Replacement or Reconstruction). Section 15302 allows for reconstruction of existing facilities when the new structure will be located on the same site as the structure replaced and will have substantially the same purpose and capacity of the existing structure. The new fence and sidewalk near the landslide, the repair and replacement of other fencing, and the other elements of the project will have the same purpose and capacity of the existing park. David Stone of Dudek, Inc. prepared a Phase I Archaeological Study. It concluded that there was no potential for significant archaeological resources. As designed, in accordance with the geological reports, no significant impacts are expected to occur.

VIII. FINDINGS

The Planning Commission finds the following:

A. PARK AND RECREATION ZONE FINDINGS:

1. That the proposed park and recreation improvements are appropriate or necessary for the benefit of the community and visitors because they will make the park safer for users;

2.. That the proposed park and recreation facilities including lighting, play areas, parking facilities and associated landscaping, will be compatible with the character of the neighborhood because the lighting is designed to reduce its effects on the surrounding neighborhood, the landscaping will be compatible with existing landscaping in the park, and there will be no changes to the play areas and parking facilities;

3. That the total area of the site and the setbacks of all facilities from the property lines and street are sufficient, in view of the physical character of the land, proposed development and neighborhood, to avoid significant negative effects on surrounding properties because no changes are proposed to the locations of higher use facilities, including the playground and group picnic areas;

4. That the intensity of park use is appropriate and compatible with the character of the neighborhood because no changes are proposed that would affect the neighborhood character;

5. That the proposed park and recreation facilities are compatible with the scenic character of the City because the new fencing will have minimal effects on coastal views; and

6. That any proposed structures or buildings are compatible with the neighborhood in terms of size, bulk and scale or location because new structures will be consistent with existing park structures.

B. COASTAL DEVELOPMENT PERMIT (SBMC §28.44.150)

1. The project is consistent with the policies of the California Coastal Act because it protects the scenic and visual resources of Shoreline Park and is designed to minimize risks to life and property as outlined in Section VI.C of the Staff Report.

2. The project is consistent with all applicable policies of the City's Local Coastal Plan, all applicable implementing guidelines, and all applicable provisions of the Code because it protects the scenic and visual resources of Shoreline Park and is designed to minimize risks to life and property, as outlined in Section VI.C of the Planning Commission Staff Report.

Exhibits:

A. Conditions of Approval
B. Site Plan
C. Applicant's letter, dated July 28, 2011
D. ABR Minutes
E. Applicable General Plan and Local Coastal Plan Policies
F. Engineering Geologic Report of the Active Landslide Area, dated February 26, 2009, and follow-up Memo, dated June 10, 2011, both prepared by Frank J. Kenton
G. Engineering Geologic Report of MacGillivray Point, dated February 26, 2009,, and follow-up Memo, dated June 10, 2011, both prepared by Frank J. Kenton

PLANNING COMMISSION CONDITIONS OF APPROVAL

1100, 1201, AND 1335 SHORELINE DRIVE
COASTAL DEVELOPMENT PERMIT
DECEMBER 1, 2011

I. In consideration of the project approval granted by the Planning Commission and for the benefit of the owner and occupants of the Real Property, the owners and occupants of adjacent real property and the public generally, the following terms and conditions are imposed on the use, possession, and enjoyment of the Real Property:

A. **Order of Development.** In order to accomplish the proposed development, the following steps shall occur in the order identified:

1. Obtain all required design review approvals, including Sign Committee approval of the new interpretive signs.

2. Make application and obtain a Building Permit (BLD) to demolish any structures / improvements and/or perform rough grading. Comply with condition G "Construction Implementation Requirements."

3. Permits.

a. Make application and obtain a Building Permit (BLD) for construction of approved development.

b. Make application and obtain a Public Works Permit (PBW) for all required public improvements.

Details on implementation of these steps are provided throughout the conditions of approval.

B. **Approved Development.** The development of the Real Property approved by the Planning Commission on December 1, 2011 is limited to: 1) Sidewalk and fencing replacement around the landslide area; 2) Fencing replacement and repair in some other areas of the park where fencing is in disrepair; 3) New fencing installation to restrict access at MacGillivray Point; 4) Bluff-top revegetation at the landslide; 5) Relocation of two park benches from MacGillivray Point to an area near the landslide; 6) Lighting replacement; 7) Informational sign replacement, and the improvements shown on the plans signed by the chairman of the Planning Commission on said date and on file at the City of Santa Barbara.

C. **Uninterrupted Water Flow.** The Owner shall provide for the continuation of any historic uninterrupted flow of water onto the Real Property including, but not limited to, swales, natural watercourses, conduits and any access road, as appropriate.

D. **Design Review.** The project, including public improvements, is subject to the review and approval of the Architectural Board of Review (ABR). The ABR shall not grant project design approval until the following Planning Commission land use conditions have been satisfied.

1. **Watering on the Bluff Edge.** Watering of vegetation on the bluff edge shall be kept to the minimum necessary for plant survival.

E. **Requirements Prior to Permit Issuance.** The Owner shall submit the following, or evidence of completion of the following, for review and approval by the Department listed

below prior to the issuance of any permit for the project. Some of these conditions may be waived for demolition or rough grading permits, at the discretion of the department listed. Please note that these conditions are in addition to the standard submittal requirements for each department.

1. **Public Works Department.**

   a. **Drainage and Water Quality.** The project is required to comply with Tier 3 of the Storm Water Management Plan. Project plans for grading, drainage, stormwater facilities and treatment methods, and project development, shall be subject to review and approval by the City Building Division and Public Works Department. Sufficient engineered design and adequate measures shall be employed to ensure that no significant construction-related or long-term effects from increased runoff, erosion and sedimentation, urban water pollutants, or groundwater pollutants would result from the project.

2. **Community Development Department.**

   a. **Requirement for Archaeological Resources.** The following information shall be printed on the site plan:

      If archaeological resources are encountered or suspected, work shall be halted or redirected immediately and the Planning Division shall be notified. The archaeologist shall assess the nature, extent, and significance of any discoveries and develop appropriate management recommendations for archaeological resource treatment, which may include, but are not limited to, redirection of grading and/or excavation activities, consultation and/or monitoring with a Barbareño Chumash representative from the most current City Qualified Barbareño Chumash Site Monitors List, etc.

      If the discovery consists of possible human remains, the Santa Barbara County Coroner shall be contacted immediately. If the Coroner determines that the remains are Native American, the Coroner shall contact the California Native American Heritage Commission. A Barbareño Chumash representative from the most current City Qualified Barbareño Chumash Site Monitors List shall be retained to monitor all further subsurface disturbance in the area of the find. Work in the area may only proceed after the Planning Division grants authorization.

      If the discovery consists of possible prehistoric or Native American artifacts or materials, a Barbareño Chumash representative from the most current City Qualified Barbareño Chumash Site Monitors List shall be retained to monitor all further subsurface disturbance in the area of the find. Work in the area may only proceed after the Planning Division grants authorization.

   b. **Geologic Reports and Memos**. The recommendations included in Engineering Geologic Report of the Active Landslide Area, dated February 26, 2009, and follow-up Memo, dated June 10, 2011, both prepared by

Frank J. Kenton; and Engineering Geologic Report of MacGillivray Point, dated February 26, 2009,, and follow-up Memo, dated June 10, 2011, both prepared by Frank J. Kenton, shall be incorporated into the plans.

c. **Signage.** A sign shall be posted on the fence at MacGillivray Point stating the Point is closed due to the high potential for sudden bluff failure.

d. **Conditions on Plans/Signatures.** The final Resolution shall be provided on a full size drawing sheet as part of the drawing sets. A statement shall also be placed on the sheet as follows: The undersigned have read and understand the required conditions, and agree to abide by any and all conditions which are their usual and customary responsibility to perform, and which are within their authority to perform.

Signed:

Property Owner		Date
Contractor	Date	License No.
Architect	Date	License No.
Engineer	Date	License No.

F. **Construction Implementation Requirements.** All of these construction requirements shall be carried out in the field by the Owner and/or Contractor for the duration of the project construction, including demolition and grading.

1. **Construction Contact Sign.** Immediately after Building permit issuance, signage shall be posted at the points of entry to the site that list the contractor's name, contractor's telephone numbers, construction work hours, site rules, and construction-related conditions, to assist Building Inspectors and Police Officers in the enforcement of the conditions of approval. The font size shall be a minimum of 0.5 inches in height. Said sign shall not exceed six feet in height from the ground if it is free-standing or placed on a fence. It shall not exceed 24 square feet if in a multi-family or commercial zone or six square feet if in a single family zone.

2. **Construction Hours.** Construction (including preparation for construction work) shall only be permitted Monday through Friday between the hours of 7:00 a.m. and 5:00 p.m., excluding the following holidays

New Year's Day	January 1st*
Martin Luther King's Birthday	3rd Monday in January
Presidents' Day	3rd Monday in February
Memorial Day	Last Monday in May
Independence Day	July 4th*
Labor Day	1st Monday in September
Thanksgiving Day	4th Thursday in November
Following Thanksgiving Day	Friday following Thanksgiving Day
Christmas Day	December 25th*

*When a holiday falls on a Saturday or Sunday, the preceding Friday or following Monday, respectively, shall be observed as a legal holiday.

When, based on required construction type or other appropriate reasons, it is necessary to do work outside the allowed construction hours, contractor shall contact the Chief of Building and Safety to request a waiver from the above construction hours, using the procedure outlined in Santa Barbara Municipal Code §9.16.015 Construction Work at Night. Contractor shall notify all residents within 300 feet of the parcel of intent to carry out said construction a minimum of 48 hours prior to said construction. Said notification shall include what the work includes, the reason for the work, the duration of the proposed work and a contact number.

3. **Construction Storage/Staging.** Construction vehicle/ equipment/ materials storage and staging shall be done on-site. No parking or storage shall be permitted within the public right-of-way, unless specifically permitted by the Transportation Manager with a Public Works permit.

4. **Unanticipated Archaeological Resources Contractor Notification.** Standard discovery measures shall be implemented per the City master Environmental Assessment throughout grading and construction: Prior to the start of any vegetation or paving removal, demolition, trenching or grading, contractors and construction personnel shall be alerted to the possibility of uncovering unanticipated subsurface archaeological features or artifacts. If such archaeological resources are encountered or suspected, work shall be halted immediately, the City Environmental Analyst shall be notified and the Owner shall retain an archaeologist from the most current City Qualified Archaeologists List. The latter shall be employed to assess the nature, extent and significance of any discoveries and to develop appropriate management recommendations for archaeological resource treatment, which may include, but are not limited to, redirection of grading and/or excavation activities, consultation and/or monitoring with a Barbareño Chumash representative from the most current City qualified Barbareño Chumash Site Monitors List, etc.

If the discovery consists of possible human remains, the Santa Barbara County Coroner shall be contacted immediately. If the Coroner determines that the remains are Native American, the Coroner shall contact the California Native

American Heritage Commission. A Barbareño Chumash representative from the most current City Qualified Barbareño Chumash Site Monitors List shall be retained to monitor all further subsurface disturbance in the area of the find. Work in the area may only proceed after the Environmental Analyst grants authorization.

If the discovery consists of possible prehistoric or Native American artifacts or materials, a Barbareño Chumash representative from the most current City Qualified Barbareño Chumash Site Monitors List shall be retained to monitor all further subsurface disturbance in the area of the find. Work in the area may only proceed after the Environmental Analyst grants authorization.

A final report on the results of the archaeological monitoring shall be submitted by the City-approved archaeologist to the Environmental Analyst within 180 days of completion of the monitoring and prior to any certificate of occupancy for the project.

G. **Prior to Final Inspection.** Prior to issuance of the Certificate of Occupancy, the Owner of the Real Property shall complete the following:

1. **Repair Damaged Public Improvements.** Repair any public improvements (curbs, gutters, sidewalks, roadways, etc.) or property damaged by construction subject to the review and approval of the Public Works Department per SBMC §22.60.090. Where tree roots are the cause of the damage, the roots shall be pruned under the direction of a qualified arborist.

H. **General Conditions.**

1. **Compliance with Requirements.** All requirements of the city of Santa Barbara and any other applicable requirements of any law or agency of the State and/or any government entity or District shall be met. This includes, but is not limited to, the Endangered Species Act of 1973 [ESA] and any amendments thereto (16 U.S.C. § 1531 et seq.), the 1979 Air Quality Attainment Plan, and the California Code of Regulations.

2. **Approval Limitations.**

a. The conditions of this approval supersede all conflicting notations, specifications, dimensions, and the like which may be shown on submitted plans.

b. All features shall be located substantially as shown on the plans approved by the Planning Commission.

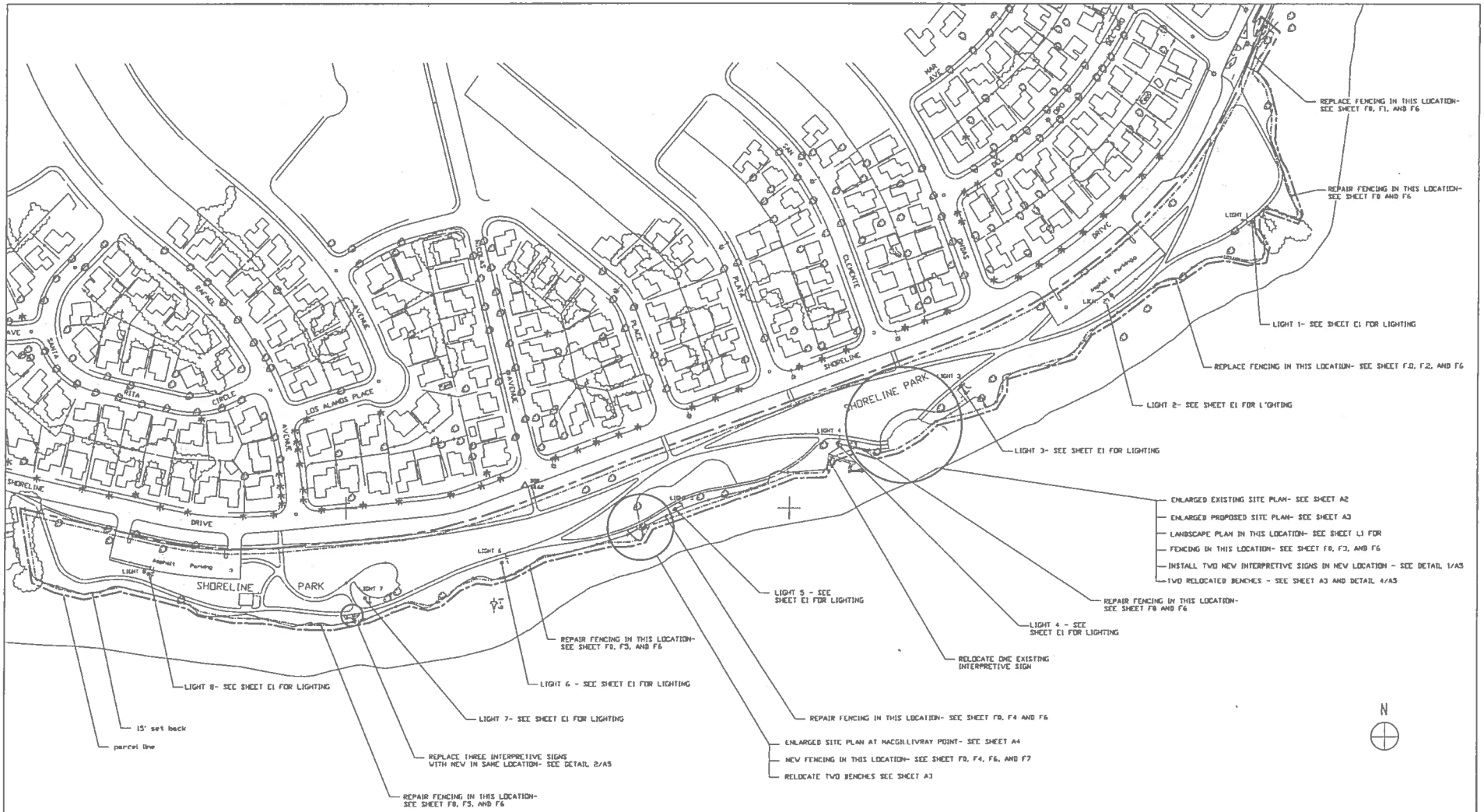
c. Any deviations from the project description, approved plans or conditions must be reviewed and approved by the City, in accordance with the Planning Commission Guidelines. Deviations may require changes to the permit and/or further environmental review. Deviations without the above-described approval will constitute a violation of permit approval.

NOTICE OF COASTAL DEVELOPMENT PERMIT TIME LIMITS:

The Planning Commission / Staff Hearing Officer action approving the Coastal Development Permit shall expire two (2) years from the date of final action upon the application, per Santa Barbara Municipal Code §28.44.230, unless:

1. Otherwise explicitly modified by conditions of approval for the coastal development permit.
2. A Building permit for the work authorized by the coastal development permit is issued prior to the expiration date of the approval.
3. The Community Development Director grants an extension of the coastal development permit approval. The Community Development Director may grant up to three (3) one-year extensions of the coastal development permit approval. Each extension may be granted upon the Director finding that: (i) the development continues to conform to the Local Coastal Program, (ii) the applicant has demonstrated due diligence in completing the development, and (iii) there are no changed circumstances that affect the consistency of the development with the General Plan or any other applicable ordinances, resolutions, or other laws.

EXHIBIT B



NO.	DESCRIPTION	DATE	APPROVED
REVISIONS			

DESIGN
DRAWN
CHECKED 7.27.11
BID NO.
PAGE
ATLAS

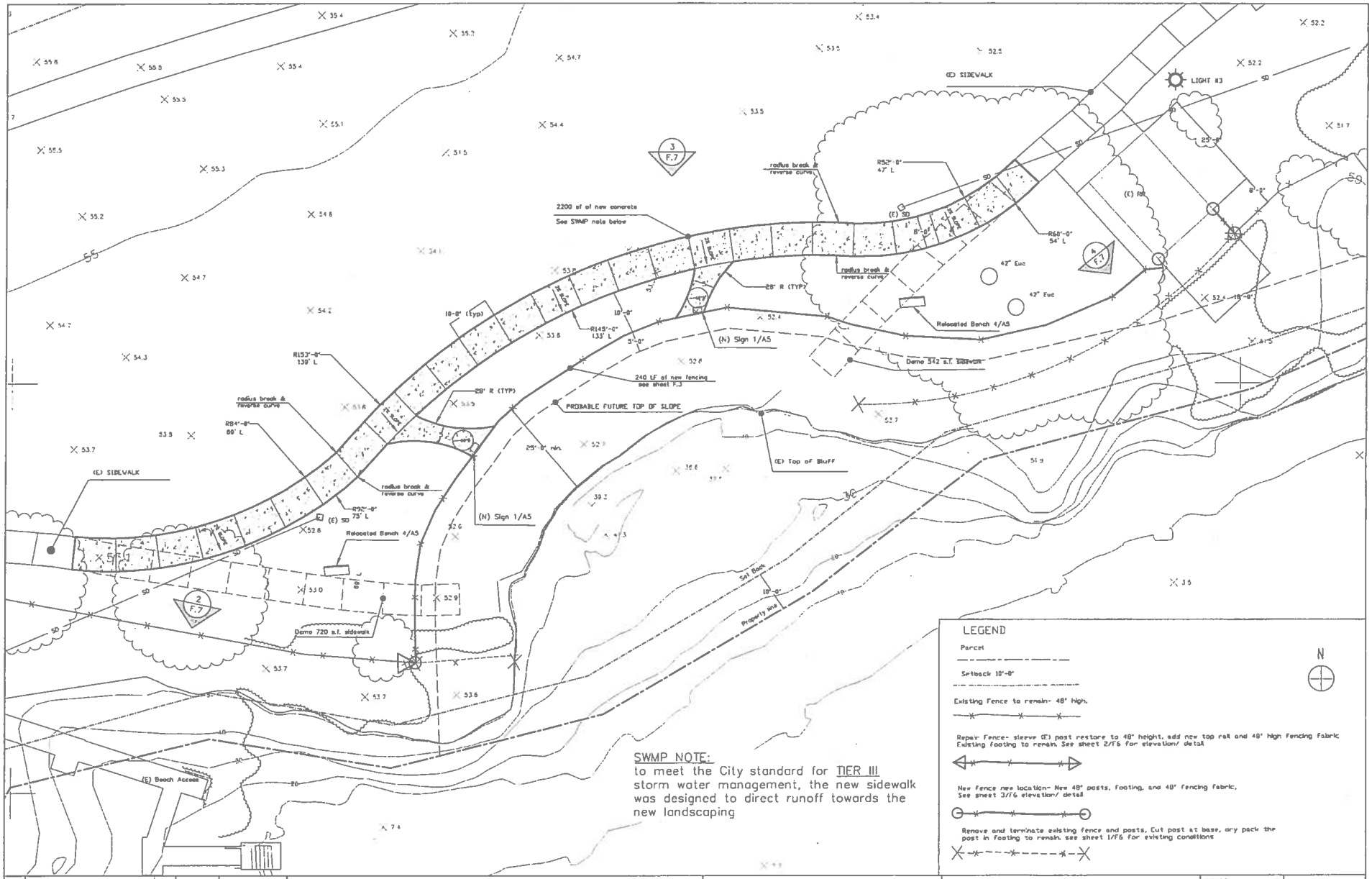
SHORELINE PARK SAFETY IMPROVEMENT PROJECT
EXISTING SITE PLAN
Shoreline Park

SHORELINE PARK
SHORELINE DRIVE
SANTA BARBARA, CA

CITY OF SANTA BARBARA
PARKS AND RECREATION, PROJECT MANAGEMENT
APPROVED :
PARKS AND RECREATION DIRECTOR DATE ____, 20____

SCALE:
VERT. 1"=100'-0"
HOR. 1"=100'-0"
DWG. NO.

PROJ. NO. 4927
ARCH. NO.
SHT. 2 OF 18 SHTS.
SHEET NO. A1



SWMP NOTE:
to meet the City standard for TIER III storm water management, the new sidewalk was designed to direct runoff towards the new landscaping

LEGEND

Parcel

Setback 10'-0"

Existing Fence to remain- 48" high.

Repair Fence- sleeve (E) post restore to 48" height, add new top rail and 48" high Fencing Fabric Existing footing to remain. See sheet 2/F6 for elevation/ detail

New fence see location- New 48" posts, footing, and 48" fencing fabric, See sheet 3/F6 elevation/ detail

Remove and terminate existing fence and posts, Cut post at base, dry pack the post in footing to remain. see sheet 1/F6 for existing conditions

N

NO.	DESCRIPTION	DATE	APPROVED
REVISIONS			

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BID NO.
PAGE
ATLAS

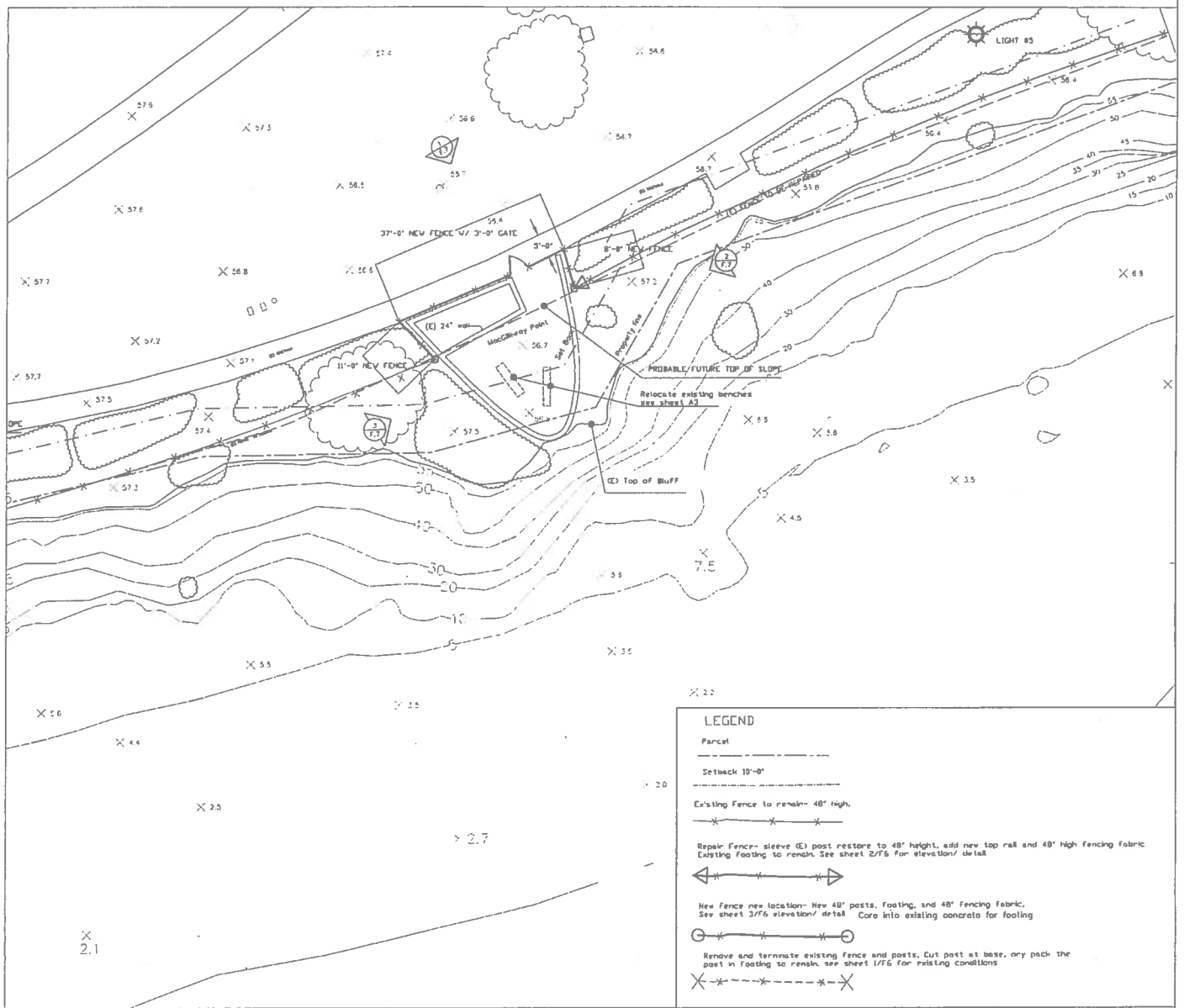
SHORELINE PARK SAFETY IMPROVEMENT PROJECT
ENLARGED SITE PLAN @ LANDSLIDE AREA
Proposed Fencing, Sidewalk, Benches, & Demolition

SHORELINE PARK
SHORELINE DRIVE
SANTA BARBARA, CA

CITY OF SANTA BARBARA
PARKS AND RECREATION, PROJECT MANAGEMENT
APPROVED :
PARKS AND RECREATION DIRECTOR DATE ,20

SCALE:
VERT. 1"=10'-0"
HOR. 1"=10'-0"
DWG. NO.

PROJ. NO. 4927
ARCH. NO.
SHT. 4 OF 18 SHTS.
SHEET NO. A3



NO.	DESCRIPTION	DATE	APPROVED
	REVISIONS		

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BID NO.
PAGE
ATLAS

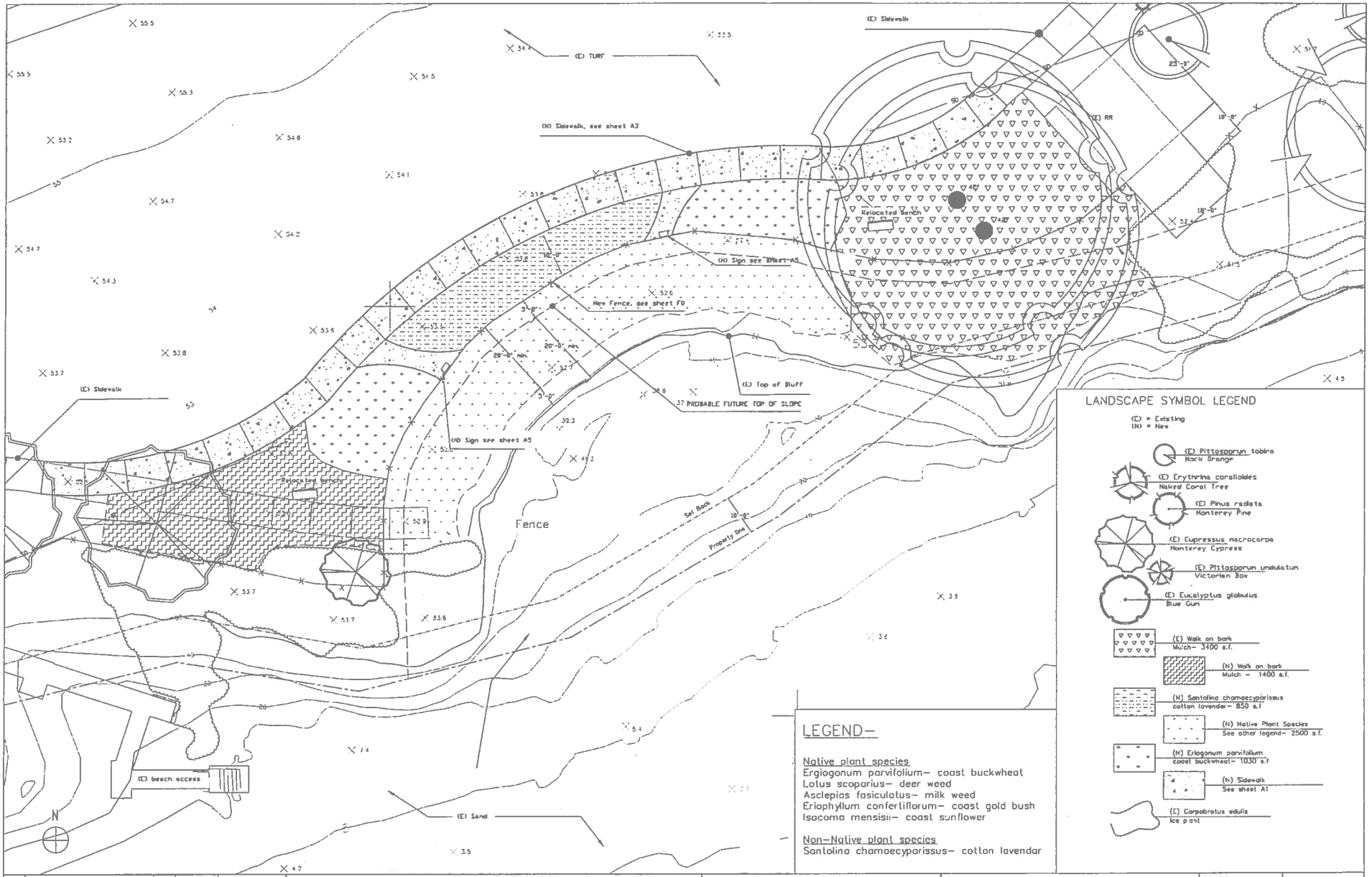
SHORELINE PARK SAFETY IMPROVEMENT PROJECT
ENLARGED SITE PLAN AT MACGILLIVRAY POINT
Proposed Safety Fencing and Gate

SHORELINE PARK
SHORELINE DRIVE
SANTA BARBARA, CA

CITY OF SANTA BARBARA
PARKS AND RECREATION, PROJECT MANAGEMENT
APPROVED:
PARKS AND RECREATION DIRECTOR DATE 20

SCALE:
VERT 1"= 10'-0"
HOR. 1"= 10'-0"
DWG. NO

PROJ. NO. 4927
ARCH. NO.
SHT. 5 OF 16 SHTS.
SHEET NO. A4



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REVISIONS			

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PAGE
ATLAS

SHORELINE PARK SAFETY IMPROVEMENT PROJECT
PROPOSED LANDSCAPE PLAN
at Landslide area

SHORELINE PARK
SHORELINE DRIVE
SANTA BARBARA, CA

CITY OF SANTA BARBARA
PARKS AND RECREATION, PROJECT MANAGEMENT
APPROVED:
PARKS AND RECREATION DIRECTOR DATE ,20

SCALE:
VERT. 1"=10'-0"
HOR. 1"=10'-0"
DWG. NO.

PROJ. NO. 4927
ARCH. NO.
SHT. 7 OF 16 SHTS.
SHEET NO. L1

Administration
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Fax: 805.564.5480

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Fax: 805.897.2524

Recreation Division Office
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Fax: 805.564.5480

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July 25, 2011

Planning Commission
630 Garden Street
Santa Barbara, CA 93101

SUBJECT: Shoreline Park Improvements, MST2009-00495

Dear Planning Commissioners:

The City Parks and Recreation Department is seeking a Coastal Development Permit (CDP) improvements to Shoreline Park located at 1100, 1201, and 1335 Shoreline Drive, in the appealable coastal jurisdiction. The park was constructed in 1967 and has been subject to periodic landslides. In January 2008, there was a substantial landslide near the easterly restrooms. Temporary fencing was installed inland of the landslide while city staff determined the extent of the landslide and where a new fence and sidewalk could be located. Additionally, around the same time, city staff became concerned about cracks in the walls at MacGillivray Point. The geologist reviewing the landslide was asked to analyze geologic concerns at the point as well.

The purpose of the Shoreline Park Improvement Project is to install permanent improvements required as a result of the 2008 landslide and to respond to safety concerns at MacGillivray Point. The project includes eight components: 1) Sidewalk replacement around the landslide area; 2) Fencing replacement around the landslide area; 3) Bluff-top revegetation at the landslide; 4) Installation of two new park benches; 5) New fencing installation to restrict access at MacGillivray Point; 6) Fencing replacement in some other areas of the park where fencing is in disrepair; 7) Lighting replacement; and, 8) Informational sign replacement. The City has grant funding through the Coastal Resources Enhancement Fund (CREF) to complete this project.

I. Background

Shoreline Park, constructed in 1967, is situated on the bluffs overlooking the beach and harbor. Features include a playground, large grassy areas, walking paths, views of the Channel Islands and whale watching, a sister city Japanese garden, and a stairway to the beach. This park includes reservable picnic and barbecue areas.

Existing Zoning and General Plan Policies

The project site is located within APN 045-240-004, a 575,760 square foot parcel (14.6 acres). It is zoned P-R/ S-D-3, Parks and Recreation and Coastal Overlay Zones and is under the appealable coastal jurisdiction, with Community Park and Beach designations. To the south is the Pacific Ocean; parcels to the northwest are zoned E-3/S-D-3, Single Family Residence and Coastal Overlay Zones; and parcels to the northeast are zoned R-2/ S-D-3, Two-Family Residence and Coastal Overlay Zone.

Discussion of Shoreline Park from the Local Coastal Plan (LCP) is included in Attachment *. There are no specific LCP policies related to the park. There is no discussion of Shoreline Park in the Parks and Recreation Element of the General Plan. The Neighborhoods discussion of the East Mesa neighborhood calls for purchase of parcels to the west of Shoreline Park for future expansion.

There is an extensive discussion of sea cliff retreat in the Hazards section of the LCP. The coastal bluffs are subject to significant erosion due to a combination of factors, including wave action, wind and rain erosion, and composition of the geology. The bluffs at Shoreline Park (as in much of the city) are underlain by Monterey Shale formation. This formation is highly fractured and tends to slope toward the ocean, which increases its erosion potential. It is also layered with bentonite clay in seams ranging from as little as a half-inch to as much as several inches. This clay is very slippery when wet and also increases landslide potential.

The Coastal Act and the LCP generally prohibit development on the bluff face other than public access to the beach and, in certain cases, drainage pipes. In order to protect development at the top of the bluff, the Coastal Act, the LCP and the city Seismic Safety/Safety Element prohibit most development within a 75-year bluff setback area. However, the park exists entirely within the 75-year bluff setback. No new significant structures are proposed.

Geology Mapping Project - Preliminary Conclusions

The Coastal bluff erosion and landslides over the last 40 years have decreased park areas. Recent landslides in late 1980s, 1995, 1998 and 2008 resulted in extensive loss of bluff and park use areas, due to sea cliff erosion, a dynamic, function of coastal geology, ecology, and urban influence. Shoreline Park is underlain by Monterey formation bedrock and overlain by Marine Terrace Deposits, softer layers subject to erosion that can destabilize harder layers of bedrock.

Active Landslide

- The landslide is 120 feet wide and 60 feet long. Wave erosion continues to remove landslide material and results in continued slide mass movement.
- A second landslide is in the initial stages of formation on the east flank of the active landslide.
- There are a number of sea caves east of the landslide which over time could contribute to future sea cliff erosion.
- A park restroom building is located above the sea caves and 26 feet from the top of slope. Future sea cliff erosion may require its removal and/or relocation.
- The probable future top of slope is 20 to 23 feet from the edge of the landslide.

- The 75-year bluff setback generally follows the southern edge of Shoreline Drive.

MacGillivray Point

- The coastal bluff around the point has slowly eroded over time, leaving little remaining bluff at the edge of the lookout.
- Cracks in the low stone walls are likely to correspond to where there will be a future landslide.
- Since a landslide in this area is likely to be sudden, a number of management options will need to be considered. These include: 1) closing the lookout indefinitely and installing a permanent chain link fence; 2) demolishing the look out and rebuilding a wall to commemorate Mayor MacGillivray; or 3) closing the lookout and monitoring the cracks to determine whether there is any change over time.
- Additional actions could include relocating the fence and sidewalk to the probably future top of slope, which is 17 to 23 feet from the existing top of slope.

Existing Slope

The Shoreline Park parcel has an estimated average slope of 13%. However, the parcel includes the bluff area. The proposed project area has an average slope of 0.05% west to east, and 0.005% north to south. The surrounding neighborhood north of the project area has a 6% average slope.

II. Project Description

The project includes the following:

- Landslide Area Fence and Sidewalk replacement
- Bluff-top Fencing Replacement
- MacGillivray Point Safety Fencing Installation and Bench Removal
- New Landscaping

These are discussed in more detail below.

1. Slide Area and Fence and Sidewalk Replacement

The existing fence and sidewalk that were lost in the landslide need to be replaced. Based on the geology report, a new probable top of slope, the location for the replacement fencing, and the location for the replacement sidewalk have been identified. The fencing will be tied into the existing fencing at each end and curve around the top of slope. The new four-foot tall fencing will have a PVC coating to reduce corrosion. Fence posts will be installed on eight foot centers and will have concrete footings. The total length will by 240 linear feet. The sidewalk will sweep around the fencing in a parallel curve, leaving a buffer zone between it and the fencing. There will be a couple of short concrete walks closer to the fence, as well.

2. Bluff Top Fencing Replacement

The existing fencing needs to be replaced in the locations that park users climb over or cut the fence to gain access to the bluff top for both illegal viewing and camping (Attachment F, photo page 24). In some locations, the moist salt air has corroded the metal all the way through the structural elements of the framework (attachment F, photo page 23). The fencing replacement parts will have a PVC coating to reduce corrosion. Some fence repair locations will require new posts with concrete footings. About 1000 linear feet of fencing will be replaced, most of it in the current location. In one location, it will be moved further from the bluff edge.

3. MacGillivray Point Safety Fencing Installation

As noted above, staff considered several options at MacGillivray Point. Based on the geologic report, staff decided that public safety called for prohibiting use of the area. It was decided that removing the existing wall and flag-stoned area would be both expensive and potentially bluff damaging. Safety fencing will be installed to prevent park goers from accessing the bluff top outlook. The 57 linear feet of fencing will be tied into the existing fencing at each end and will include a gate to allow park staff to access for maintenance reasons. The existing benches will be removed by cutting off the supports at ground level. The new four foot tall fencing will have a PVC coating to reduce corrosion. Fence posts will be installed on eight foot centers and will have concrete footings.

4. Landscaping

The first planting location will cover 3000 square feet of the coastal bluff-top and will be between the existing top of slope and the new relocated fencing. This area will be planted with Salvia leucophylla ('Point Sal' purple sage), Artemisia californica (California sagebrush), and an herbaceous mix consisting of:

Eriogonum parvifolium – Cliff buckwheat
Verbena lasiostachys – Western vervain
Erigeron glaucus – Seaside daisy
Isocoma venetus – Coastal golden bush

The plants in the first planting area were selected because they have a robust root system; also these plants are native to Southern California coastal bluffs, and do particularly well adjacent to the Pacific Ocean. These plants were planted at the Douglas Family Preserve in a similar setting and grew to the expected stature within 60 to 75 days. Additionally, the plants have been selected based on vigor, ease of maintenance, and the diversity of height, ranging from low to 48 inches or less. The planting will take place between January and March. Once the planting has occurred, four inches of mulch will be placed on the bed to reduce evaporation.

The second planting area will cover 2500 square feet and will be between the proposed replacement fencing and the proposed replacement sidewalk, creating a buffer zone. This area will be planted with Osteospermum fruticosm (African daisy). This species was chosen because ??

The watering schedule will be as follows:

The day of planting - two gallons of water for each plant
At one week - two gallons of water for each plant
At the second week - two gallons of water for each plant
At four weeks - two gallons of water for each plant
At six weeks - two gallons of water for each plant
At 10 weeks - two gallons of water for each plant
At 14 weeks - two gallons of water for each plant
At 18 weeks - two gallons of water for each plant

At that time, the planting should be well established and would require no further watering.

5. New Benches

The Parks and Recreation Department is proposing two new seating locations based on the layout of the replacement sidewalk and fencing. The two new benches will allow park goers new perspectives of the Pacific Ocean and will also create a nice place to rest.

6. Lighting Replacement

The existing light fixtures need to be replaced due to excessive corrosion from the sea air, inadequate modifications to create light cut-offs, and the characteristics of the metal halide light bulb. Metal halide bulbs produce a significant amount of wasted light from the top and sides of the lens. Not only does this result in lower efficiency, it also contributes to "light pollution". LED lights feature directional characteristics, and can reduce night sky pollution. The narrow beam angle on LED lights provides illumination within the intended areas only. Not only does this reduce light pollution, but also promotes higher overall energy efficiency.

7. New Signage

Existing educational signs at the top of the Shoreline Park stairs will be replaced because they are in poor conditions. At least one of the new signs will include information on coastal bluff geology.

8. Demolition

Demolition will require the removal of eight existing light poles with concrete footings, the removal of 1060 square feet of existing concrete sidewalk, and the removal of 1000 lineal feet of fencing fabric. All the existing concrete that slid to the beach in the landslide has been removed. The equipment needed to do the demo will include a concrete saw, a skiff (front loader) with a back hoe, and a jack hammer.

The duration of the demolition will be less than five days. About * workers will be needed.

9. Construction

Construction activities will include excavating and setting concrete forms for new concrete sidewalk, building and setting forms for concrete light pole footings, pouring the concrete, installation of new fence posts with concrete footings, and installation of the fencing fabric. The equipment needed to do the concrete work will include a skiff (front loader) with a back hoe, a walk behind road-roller compactor, a vibra-plate soil compactor, and a nine yard concrete truck. The fencing installation will require a delivery truck (flatbed), a post-hole auger, and small concrete mixer. The landscaping installation will take about one to two weeks for the installation of the planting and the placement of the irrigation drip tube. The new landscaping will use an existing water valve.

The construction and landscaping activities are estimated to be complete in 45 working days. About * workers will be needed.

9. Hazardous Material

There is no hazardous material identified within this project.

III. Technical Reports

Information within the Engineering Geologic Reports and follow-up memos is provided by Frank J. Kenton with Project Design Consultants. The full content of the consultants' reports and memos can be found in the attachments C and D.

A Phase I archaeological survey has also been completed. It concludes that the project would have less than significant residual impacts on the unlikely potential to encounter unknown, intact archaeological resources. No construction monitoring will be required. Only the standard condition regarding what to do if potential resources are found during construction is recommended by the report.

IV. Conclusion

Please do not hesitate to call me in the Parks and Recreation Department at 897-1906 or email jhubbell@santabarbaraca.gov or kstrasburg@santabarbaraca.gov if you have any questions or need clarification. Thank you for your assistance.

Regards,

Jill Zachary, Assistant Parks and Recreation Director

Cc: Jan Hubbell, Parks Project Manager

Attachments:

A. Project Plans, dated September 2009

B. Engineering Geologic Report of the Active Landslide Area, dated February 26, 2009, and follow-up Memo, dated June 10, 2011, both prepared by Frank J. Kenton

C. Engineering Geologic Report of MacGillivray Point, dated February 26, 2009,, and follow-up Memo, dated June 10, 2011, both prepared by Frank J. Kenton

D. Coastal Development Permit Application

E. Design Review Submittal Checklist

F. Planning Commission Submittal Packet

CONCEPT REVIEW - NEW ITEM: PUBLIC HEARING

1. SHORELINE PARK P-R/SD-3 Zone

Assessor's Parcel Number: 045-240-004
Application Number: MST2009-00495
Owner: City of Santa Barbara
Applicant: Keven Strasburg

(Proposed replacement of the landslide-affected sidewalk segment with 2,000 square feet of sidewalk landward of the previous location, removal of temporary fencing and installation of 240 linear feet of black vinyl fencing in the landslide area and 57 linear feet of black vinyl fencing at MacGillivray Point, repair of 1,000 linear feet of existing fencing, removal of 1,060 square feet of existing concrete, installation of two new park benches, replacement of eight existing light fixtures and poles, and new landscaping. The project requires Planning Commission review for a Coastal Development Permit.)

(Comments only; Project requires Environmental Assessment and Planning Commission review for a Coastal Development Permit.)

(3:11)

Present: Keven Strasburg, Applicant; and Billy Goodnick, Landscape Architect.

Public comment opened at 3:21/3:32 p.m.

Roger Soalueter: questioned the purpose and necessity of the proposed fencing at MacGillivray Point.

An opposition letter from Paula Westbury was acknowledged by the Board.

Kellam de Forest posed questions regarding the proposed lighting and new benches.

Public comment closed at 3:24/3:34 p.m.

Motion: **Continued indefinitely Planning Commission and then return to Consent with the following comments:**

1) The project is ready for Preliminary and Final approval.
2) Increase the radius at both transitions of the new sidewalk to the existing sidewalk for a smooth transition.
3) Provide signage on the proposed temporary fencing at MacGillivray Point stating the reason for the fencing.
4) Study shrouding the restroom wall packs or replace the fixtures with an LED lighting to match the proposed lighting for the park.

5) The Board appreciates the replacement of the proposed light fixtures with the down-cast light fixtures. Add the proposed light fixtures and specification details to the plans.

6) Study the possibility of adding a drain to resolve the standing water during rainy seasons.

Action: Zink/Mosel, 6/0/0. Motion carried. (Sherry/Gross absent).

GENERAL PLAN AND LOCAL COASTAL PLAN POLICIES RELATED TO SHORELINE PARK

LAND USE ELEMENT

Shoreline Park is in the East Mesa Neighborhood. The East Mesa Neighborhood includes the following discussion of Shoreline Park:

> "Shoreline Drive serves both as a necessary element of the circulation system and as a scenic drive. Remaining land west of Shoreline Park between Shoreline Drive and the ocean is proposed ultimately to be acquired for park purposes. For many years the people of Santa Barbara have had the foresight to reserve the oceanfront for public use and local residents are now enjoying the benefits of such foresight. The philosophy of preserving scenic and recreational areas for future generations should be continued and reinforced by efforts in this generation, adding to our heritage and thus passing along greater resources to the future.

OPEN SPACE ELEMENT

Shoreline Park is part of the Shoreline open space discussed in the open space element. The Open Space Element states: "The preservation of the shoreline as an open space will require care in the types of improvements that are allowed to be sure that the natural qualities are not destroyed or obscured." Actions regarding the shoreline in the Open Space Element include:

1. Determine need for access to the shoreline. Acquire necessary rights-of-way by January 1, 1975.
2. Improve all access routes to the shoreline by July 1, 1977.
3. Prohibit the installation of any improvements which would change the nature of the tidal beaches at the base of the Mesa bluff.
4. Examine methods of preventing cliff erosion and institute any programs found to be effective.
5. Delineate all public beach areas and dedicate them for public open space and recreation purposes by July 1, 1973.

SCENIC HIGHWAY ELEMENT

Shoreline Drive is recommended as a City Scenic route by the Open Space Element. The primary concern in the area of Shoreline Park is making sure that speed limits are low enough to allow for enjoyment of scenic views while driving safely.

CONSERVATION ELEMENT

SHORELINE

The shoreline, harbor, and waterfront areas are key aesthetic assets which provide diverse recreational opportunities and passive enjoyment of the sea, sand, and scenic views. From the beaches, views of the ocean and the islands, with sailboats in the harbor, are the dominant visual elements. Cabrillo Boulevard, a designated scenic highway, has views of not only the ocean and Palm Park, but also of the Bird Refuge, Child's Estate, Montecito foothills, and the Santa Ynez Mountains. (See the Scenic

Highways Element for a further description of Cabrillo Boulevard. Other scenic routes include parts of Sycamore Canyon Road, Stanwood Drive, Mission Ridge Road, and Mountain Drive.) The importance of the harbor and the shoreline as scenic resources cannot be overestimated, as the City's location at the juncture of land and sea is fundamental to the charm and character of the community. The significance of this resource is reflected by the designation of "unique visual sensitivity" on the Scenic Resources map.

Scenic corridors providing views of the hills and mountains, as seen from the beach and Cabrillo Boulevard, are valuable resources. Despite the presence of a substantial number of tourist-oriented developments on the inland side of Cabrillo Boulevard, view corridors continue to exist. If development is allowed in these remaining open areas without proper height, set back, and design limitations, the visual corridors could be blocked and inland views impaired, thereby causing a decline in the aesthetic amenities of the shoreline. Palm Park and the beachfront are particularly sensitive to such "filling in" of view corridors.

VISUAL RESOURCES

Goals

- Protect and enhance the scenic character of the City.
- Protect significant open space areas from the type of development which would degrade the City's visual resources.

Policies

3.0 New development shall not obstruct scenic view corridors, including those of the ocean and lower elevations of the City viewed respectively from the shoreline and upper foothills, and of the upper foothills and mountains viewed respectively from the beach and lower elevations of the City.

5.0 Significant open space areas should be protected to preserve the City's visual resources from degradation.

SEISMIC SAFETY/SAFETY ELEMENT

GOALS

The goals of the Seismic Safety and Safety Element provide a link between the identified problems and issues and the policies and implementation measures which follow. They provide basic guidelines for City decisions related to natural hazards and assets as they affect land use planning and development standards. The following are recommended major goals for adoption:

To protect life, property, and public well-being from seismic and other geologic hazards.

To reduce or avoid adverse economic, social, and environmental impacts caused by geologic conditions.

POLICY (partial)

To maintain, revise (whenever necessary), and enforce existing standards and criteria to reduce or avoid all levels of seismic or other geologic risk.

...

To advocate improved seismic safety programs for schools and promote greater general public awareness of all types of geotechnical hazards.

Erosion Recommendations:

1. Detailed grading plans with strict revegetation provisions shall be required for all sites of proposed structures in areas of active erosion or high erosion potential. If cuts greater than 4 feet in height are proposed, the grading plan should consider erosion control in areas with a conditional erosion potential.
2. Major construction projects in areas of active erosion or high erosion potential shall be required to implement erosion and sediment control procedures during the construction phase of the project.

Seacliff Retreat - Local Conditions

... [A]ll of the seacliffs in Santa Barbara are experiencing active erosion and retreat. Due to local variations in the strengths of the material that comprise the seacliff, bedding plane orientation, and the adverse effects of development and human interference, some areas are experiencing more rapid erosion and retreat than others.

Active erosion (gullying and sedimentation active during the winter months) and historically active landslides can be observed on the cliffs below the Mesa, extending from Santa Barbara Point westward to the city limits. ...

Seacliff Retreat Recommendations:

1. New development on the top of the cliff shall be placed at such distance away from the edge of the cliff that normal rates of erosion and cliff material loss will not seriously affect the structure during its expected lifetime.

   Using the following simplified formula, a preliminary seacliff setback line has been devised (Hoover, 1978):

   $$\text{Setback} = \frac{\text{height of the shale seacliff}}{\text{tangent of dip}} = (\text{thickness of terrace})(2) + (8\text{"/yr})(75 \text{ years})$$

   This formula assumes that unsupported bedding planes are unstable, the average rate of seacliff retreat is eight inches per year, terrace deposits (soil material deposited on top of shale)stabilizes at a 2(H):1(V), and the design life of the project is 75 years. This preliminary setback line is depicted on the seacliff maps.

2. As discussed earlier in this section, the addition of water to the seacliff can significantly lower inherent cliff stability and cause a stable cliff to become unstable.
    a. Erosion caused by rainwater collecting on the top of the seacliff and then running over the edge can be minimized by installing lateral or "French" drains to collect and control the water. The water can then be piped off the property and properly disposed of in storm sewers. New development shall be required to install some satisfactory means of removing water from the cliff top. Owners of existing structures should be encouraged t install their own drainage devices to protect their homes and property.
    b. To prevent excess water from being applied to the top of the cliff for gardening purposes, the planting of lawns, gardens, etc., should be discouraged. Instead, a native vegetation that is drought resistant, and that has deep, strong root systems to aid in stabilizing the cliffs should be planted. A list of drought-resistant native vegetation is included in Appendix 6. Most of these plants will grow rapidly but are small or medium in size, so as not to obstruct views.
3. In attempt to impede the cliff retreat process, programs to control or prohibit the following activities that can significantly alter the rates of seacliff erosion and retreat shall be implemented.
    a. Improper Access – Improper access may be discouraged by providing existing, established official beach access routes with additional parking, improved access facilities, and publicizing their locations. The use of unmaintained, improvised access routes that have the potential or are creating a serious erosion problem should be discouraged. This could be done by posting informational signs at the top of the cliff near the access route, describing the adverse effects that improper access can cause and where the nearest maintained access routes are located.
    b. Loading – Development that will add adverse amounts of excessive weight to the top of the cliff (i.e., large structures, swimming pools, artificial fill, etc.) shall be discouraged.
    c. Improper Vegetation – Where feasible, existing non-native vegetation that requires large amounts of water, such as ice plant and annual grass, shall be replaced with native vegetation.
    d. Trash Disposal – The disposal of any material onto the face of the cliff, including brush clippings from landscape vegetation, shall be prohibited.
4. To protect seacliffs and the structures placed on them from erosion caused by wave action, retaining walls, broken concrete or stone revetment[s], breakwaters, and groins are sometimes used. Before the construction of these or any other shoreline protection structure is allowed, the need and potential for adverse environmental impacts of the project shall be evaluated by appropriate engineers as designated by the Building Official.

LOCAL COASTAL PLAN

Discussion of Shoreline Park

Shoreline Park

Location: 900 block of Shoreline Drive; extending from La Marina to west of San Rafael Avenue.
Size: 14.67; 3,600 feet (0.681 miles) of bluff top frontage.

Off-Street Parking: 106 spaces

Public Dedication: Yes

Description: Shoreline Park occupies the Mesa Bluff area overlooking the ocean. The elongated park includes an enclosed children's play area, expansive turfed areas, picnic areas with barbecue pits and tables, restrooms, wide walkways, and ocean vistas. Location and special recreational facilities have contributed to Shoreline becoming one of the City's most popular parks. Shoreline's expansive ocean view has also contributed to the park's special significance as a whale watching site. Parking is available at both the easterly and westerly entrances.

History: Prior to the 1920s the portion of La Mesa containing Shoreline Park was part of the Law and Babcock farms. Following the development of the Marine Terrace subdivisions and Shoreline Drive in the early 1950s, the site was left vacant. By 1963 City residents feared this coastal land would be developed for residential use, impeding public views and access. Public demand caused the City Council to pass a resolution condemning the land for park and recreation uses in 1963.

An ad hoc "Save Our Shoreline Committee" campaigned for passage of a park acquisition and development bond. The bond proposal passed in August, 1964. The City applied for Federal Land and Water Conservation Fund money to help with acquisition costs and in August, 1967 received $325,000 toward the total purchase price of $852,845.

Restrictions: None

Hazards Policy

Policy 8.2

With the exception of drainage systems identified in Policy 8.1, no development shall be permitted on the bluff face except for engineered staircases or accessways to provide public beach access and pipelines for scientific research or coastal dependent industry. To the maximum extent feasible, these structures shall be designed to minimize alteration of the bluff and beach.

Action

- Amend the Seismic Safety/Safety Element to the City's General Plan to include the above referenced two policies related to hazard reduction of seacliff retreat.

RELEVANT COASTAL ACT POLICIES

Public Access:

30231. Oceanfront land suitable for recreational use shall be protected for recreational use and development unless present and foreseeable future demand for public or commercial recreational activities that could be accommodated on the property is already adequately provided for in the area.

Land Resources:

30240. (a) Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas.
(b) Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreation areas.

30244. Where development would adversely impact archaeological or paleontological resources as identified by the State Historic Preservation Officer, reasonable mitigation measures shall be required.

Development:

30251. The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural land forms, to be visually compatible with the character of surrounding areas, and, where feasible, to restore and enhance visual quality in visually degraded areas. New development in highly scenic areas such as those designated in the California Coastline Preservation and Recreation Plan prepared by the Department of Parks and Recreation and by local government shall be subordinate to the character of its setting.

30253. New development shall do all of the following:
(a) Minimize risks to life and property in areas of high geologic, flood, and fire hazard.
(b) Assure stability and structural integrity, and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs.
(c) Be consistent with requirements imposed by an air pollution control district or the State Air Resources Board as to each particular development.
(d) Minimize energy consumption and vehicle miles traveled.
(e) Where appropriate, protect special communities and neighborhoods that, because of their unique characteristics, are popular visitor destination points for recreational uses.

Frank J. Kenton
250 East Easy Street #6 • Simi Valley, California U.S.A. 93065

February 26, 2009

Ms. Jill Zachary
Assistant Parks and Recreation Director
City of Santa Barbara
620 Laguna Street
P.O. Box 1990
Santa Barbara, CA 93102

SUBJECT: Engineering Geologic Report of the 2008 Active Landslide Shoreline Park, Santa Barbara, California.

INTRODUCTION

This report presents engineering geologic observations of the 2008 Active Landslide Shoreline Park Santa Barbara, California. Since initial movement in the early morning hours of January 25, 2008, landslide movement has continued. The landslide is subject to beach erosion, which removes toe support and leaves the toe of the landslide near the beach saturated. A second smaller landslide is forming upslope and along the east flank of the larger landslide.

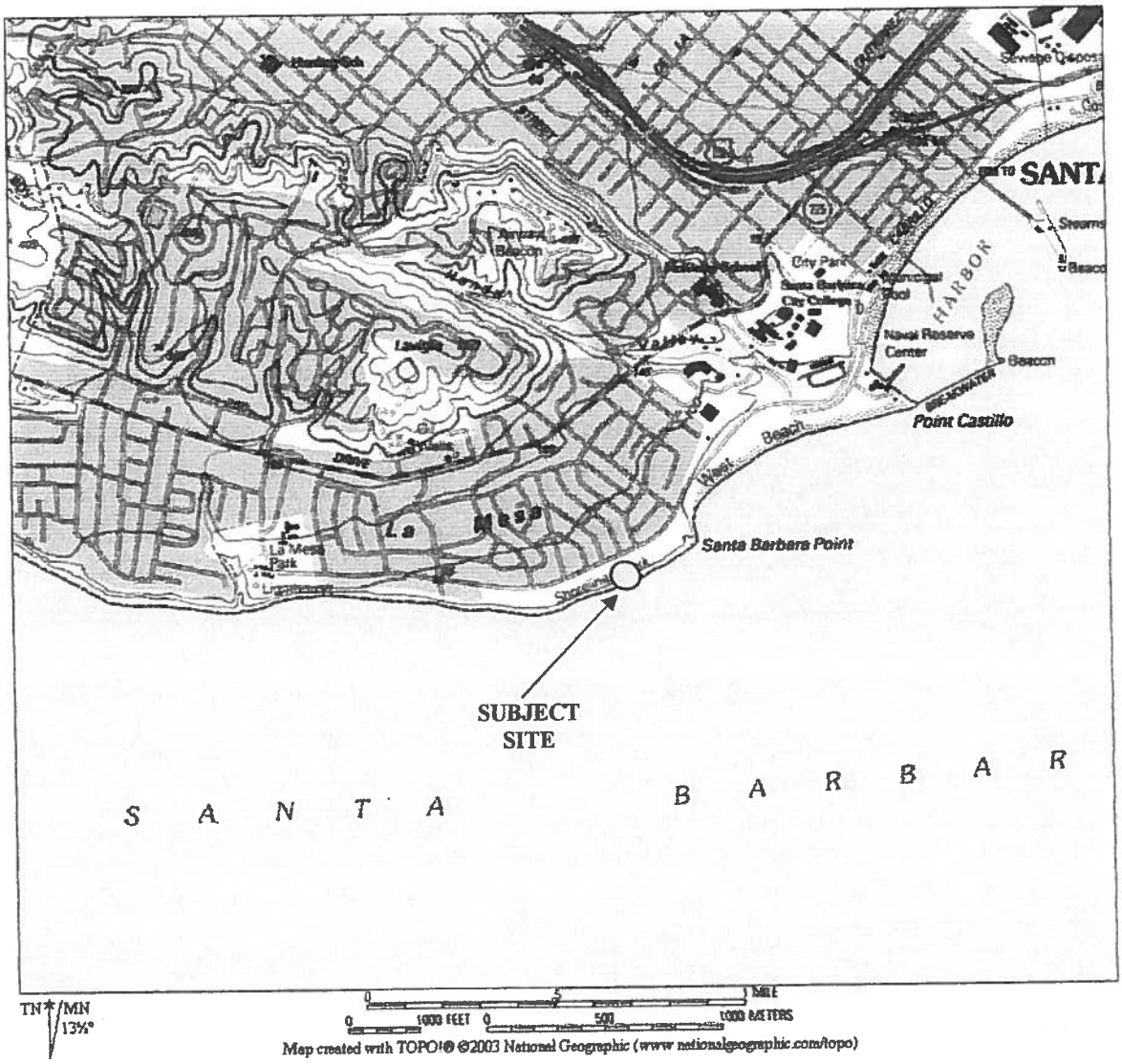
Active landslide movement occurring on the park slopes descending to the beach is part of natural geologic processes associated with sea cliff erosion. As a result, park use will change over time. This report presents engineering geologic observation and presents a Probable Future Top of Slope to be considered in current park use. Present and future sea cliff erosion keeps the sea cliff in a dynamic changing condition. As slope conditions change significantly, future engineering geologic evaluations will likely be needed. Changed conditions will also necessitate revisions in the Probable Future Top of Slope.

Accompanying Figure Plate and Attachment:

Phone: (805) 520-0831 Fax: (805) 520-0838

EXHIBIT F

LOCATION MAP



Shoreline Park Active Landslide
City of Santa Barbara Parks and Recreation
Santa Barbara, California

Figure 1

SITE DESCRIPTION

Shoreline Park is a long narrow parcel that is located between Shoreline Drive on the north and the ocean on the south. La Marina Drive is near the east park boundary and San Rafael Avenue is near the west park boundary. This popular park provides panoramic views of the beach, harbor, and Channel Islands.

Bluff top gradients are relatively gentle with paved sidewalks and grass being the predominate cover. Slopes descending to the beach are in a natural condition. At the active landslide there is about 53 feet of topographic relief between the bluff top and mean sea level. Because the descending slopes are natural and subject to the coastal erosion process, they are near vertical with bedrock, and overlying terrace deposits exposed.

An active landslide is occurring mid-park. This landslide is east of the Shoreline Steps and approximately 96 feet west of the restrooms. The landslide (Ols1) is approximately 120 feet wide and 60 feet long, and toes on the beach at about elevation 7 feet. A second landslide (Qls2) is forming near the bluff top along the east flank of the larger slide.

East of the landslides, coastal erosion is undercutting the sea cliff and forming caves. Upslope from this area is a 30 x 26 foot concrete block building being used for restrooms. The southwest corner of the restrooms is approximately 26 feet from the bluff edge. Park surfaces are gently sloping in a south or southeast direction toward the ocean, with an approximate 3.7-foot elevation drop from Shoreline Drive to the bluff edge.

Figure 1 presents the site location on a U.S.G.S. topographic base map. Appendix A presents an oblique aerial and four site specific photographs for reference.

GEOLOGIC CONDITIONS

Geologic Setting

Shoreline Park is located along a part of the Santa Barbara Coastline that lies within the Transverse Ranges geomorphic province. The park is within the La Mesa portion of the Santa Barbara fold belt. Shoreline Park is underlain by Monterey Formation bedrock and is overlain by unconformable younger age terrace deposits (Hoover 1978, Dibblee 1986, Minor, et al. 2006).

Earth Units

Marine Terrace Deposits (Qt) underlie the park, and are upper Pleistocene in age. The basal contact is unconformable with the underlying bedrock. They are brown to gray, crudely bedded and moderately consolidated. These deposits consist of sand, silty sand, clayey sand and some gravel beds. The basal contact has a gravel layer that contains cobbles. The surface of the terrace deposits have been reworked by human activities. Artificial fill material may overlay the terrace deposits. Within the subject site, this fill material is anticipated to be relatively thin and has not been differentiated as a separate unit for this geologic study.

Monterey Formation (Tm) bedrock underlies the site. It is light color and composed of siliceous and calcareous, and phosphatic mudstone and shale. This area has been identified to be middle and lower Miocene in age, and the lower unit of the Monterey Formation, by Minor et al. in U.S.G.S. Open File Report 02-136, 2006.

Beds within the formation vary from moderately hard to very hard. Thin, weaker, and often clayey layers occur between these hard beds. Softer interbedded layers may erode at faster rates. Soft bed erosion undercuts harder beds removing support, and making this harder layer more susceptible to failure. The clayey composition of the softer beds has weaker material strengths and provides planes that are more prone to slippage. Three sea caves are developing in the area between Landslide 1 and restrooms. Sea cave #1 is the largest and cuts into the slope approximately 22 ½ feet. The approximate location of the sea caves are shown on the geologic map.

Bedding plane strike and dip within the mapped area are generally striking to the northwest and dipping toward the southwest, which is in agreement with published regional geologic maps. Local variations in bedrock structure and bedding plane orientation occur. These variations, such as the small scale folding and flattening of the dip in the area of Landslide 1, result in influencing the width and length of the landslide.

A minor fault was mapped near the east and the subject site. This fault is striking to the northwest and dipping 67 degrees to the northeast. The fault is based upon offset beds and is considered to be localized within that stratigraphic section. No known active or potentially active faults have been mapped through the subject site. The closest potentially active fault near the site is the Lavigia Fault. The Lavigia Fault extends from the Hope Ranch area, crosses La Mesa north of the subject site, and continues out to sea, north of Santa Barbara Point. Seismic analysis for the subject site is beyond the scope of the authorized work.

Landslides

Landslide 1 (Qls1) is an active bedrock landslide. Based upon recent topographic survey, it is approximately 120 feet wide and 60 long. There is approximately 46 feet of topographic relief from the landslide toe to the top of landslide head scarp. Photographs 1, 2, 3, and the general site photograph in Appendix A, show Landslide 1.

This landslide has exhibited continued movement since beginning. Bedrock structure, composition and bedding, and orientations, are factors that influence the landslide translational movement. Due to the slide mass instability, it is not safe to climb and observe the lateral and head scarps. A well-developed rupture surface can be observed near the toe particularly after a high tide has eroded this area, and prior to more landslide material moving downslope. This rupture surface consists of a yellow to gray soft plastic clay that varies in thickness to approximately 10 inches, and is mashed, gnarled, and striated. The rupture surface is striking northeast N52-61E and dipping 32 to 38 degrees to the southeast. This orientation roughly parallels the slope contours. Below this rupture surface is a dark gray shade that is soft to the pick. The basal landslide plane appears to be slightly higher than beach elevation. Continued Landslide 1 erosion may result in a coastline similar to Photograph 4. This is an old landslide area west of the shoreline park steps, where erosion has removed most of the landslide material.

Landslide 2 (Qls2) is in the incipient state of movement. This landslide is developing on the east flank of the active landslide. The head scarp can be observed by an arcuate shaped lineation in the aerial photographs. The failure surface has the potential to toe through the east lateral scarp of Landslide 1. If this occurs, the landslide toe has the potential to daylight in the sea cliff. There is a potential that raveling and fall of daylighting slide material from above will occur.

Surficial failures (Sf) are occurring along the sea cliffs. Often this material falls leaving only the outline of the failure with all material gone. The geologic maps show areas where this material has accumulated on the slope face or near the bottom. These shallow failures often are associated with vegetation growth and may represent vegetation that has been transported downslope at the time of failure.

Groundwater

Seeps are occurring in the sea cliffs. The terrace deposits are more permeable than many bedrock beds. It is possible that ground water migration is occurring along the terrace deposits basal contact. However, no well-developed seeps were observed where the terrace deposits daylight on the sea cliff. The seeps appear to be influenced by bedrock composition, joints, fractures and bedding planes. Several seeps may be associated with a particular bedding plane. General seep areas within the map limits are noted on the geologic map. Water quantities are sufficient for the growth of evaporate deposits at some locations.

The source of the ground water requires further definition. Seepage saturates the seacliff where it occurs. This surfacing ground water can weaken bedrock strengths and adversely impact clay beds. Seepage or surfacing groundwater promotes quicker weathering and slope slippage.

Potential sources for water include rainfall, subsurface water flow from up gradient sources, irrigation, leaking water lines and leaking storm drain lines. Storm drain lines collect surface runoff water from Shoreline Drive and the surrounding Mesa neighborhood (421 acres), and outlet this water at the sea cliffs. No storm drain lines were within the map limits.

SEA CLIFF SETBACK

A Probable Future Top of Slope to be considered for current park use is presented on the geologic map included with this report. The Probable Future Top of Slope varies across the site. Plate 1 shows dimensions that range from 20 feet from the top of slope at the active landslide head scarp and 23 feet from the top pf slope at the southwest corner of the restrooms. Fence construction around this area should be an additional 5 feet inland from the Probable Future Top of Slope. This Probable Future Top of Slope is for park use and not for construction of new buildings. The Probable Future Top of Slope is not a 75-year setback. Therefore, as slope conditions change significantly, future evaluations will likely be needed. Changed conditions will also necessitate revisions in the Probable Future Top of Slope.

Bedrock conditions vary across the map area. Within and adjacent to Landslide 1, a 1.7:1 (horizontal to vertical) setback in the center of the slide mass was used. This setback is based upon slide plane geometry observed in the landslide toe area.

East of Landslide 1 and downslope from the restrooms, a 1.1 (horizontal to vertical) setback was used because bedding planes steepen. The southwest corner of the restrooms is close to and just outside of the Probable Future Top of Slope. It is anticipated that relocation of the restrooms will be required some time in the future once Landslide 2 and the sea cave join.

Landslide 2 is located between the restrooms and Landslide 1. Based upon recent aerial photographs, Landslide 2 is creeping. Once the landslide further develops, a narrow point will exist between the slide area and sea cave #1. Erosion in this area will advance toward sea cave #1.

West of Landslide 1 the Potential Future Top of Slope intersects an existing fence line. This fence line is the minimum Probable Future Top of Slope.

The minimum fence setback from the Probable Future Top of Slope should be 5 feet.

CONCLUSIONS

1) Shoreline Park is an area of active Coastal Processes. These natural processes result in changed slope conditions over time. Slopes descending to the beach erode and move at different rates depending on area specific geologic conditions. Public interface with these natural processes needs to consider a range of park use options. These options include precluding public access, seasonal access, and monitoring of areas with use based upon the monitor data. Park use and risks assumed is a management decision. Geologic conclusions to assist in the management decision are provided below.

2) Landslide 1 is a deep-seated bedrock landslide. Landslide movement is translational along clay surfaces. Wave erosion continues to remove landslide material, resulting in continued slide mass movement. This process will continue until a large portion of the slide mass is removed.

3) Landslide 2 is in the incipient stages of formation. Some creep has occurred to form the lineation observed in the oblique aerial photographs. Landslide movement could potentially result in slope raveling and landslide material fall onto the beach near the east slide scarp.

4) A line representing the Probable Future Top of Slope is drawn on the geologic map. This line is based upon current site conditions. This is not a 75-year setback line for new building construction. The line represents a setback for park use. As the coastal process causes natural site condition changes, revisions in the Probable Future Top of Slope will be required.

5) All park fencing should be set back a minimum of 5 feet inland from the Probable Future Top of Slope shown on the geologic map. At the active landslide head scarp the total distance from top of slope is 25 feet and at the southwest corner of the restrooms the total distance from top of slope is 28 feet.

6) The southwest corner of the restroom building is close to the Probable Future Top of Slope. While relocation does not have to occur immediately, future sea cliff erosion will require relocation.

7) Monitoring by survey can be implemented to further assist in determining sea cliff erosion, but it is not required at this time. When the sea cliff is closer to the restrooms this option should be considered.

REMARKS

The conclusions contained herein are based upon findings and observations made from geologic interpretation of surface observations and review of available in-house documents. Subsurface exploration is necessary to determine the conditions at depth.

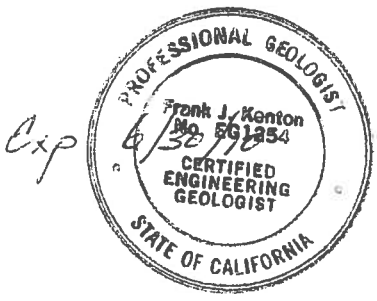
This report is issued for planning purposes. Site conditions will change over time. Future engineering geologic observations will be required.

The scope of our services did not include any environmental assessment or investigation of the presence or absence of hazardous materials or toxic materials in the soil, surface water, groundwater or air, on below or around the site.

This report has been compiled for the exclusive use of the City of Santa Barbara, its agents, or its representatives. It shall not be transferred to or used by other parties, or applied to any project in this study area other than as described herein, without consent and/or thorough review by Frank J. Kenton.

Thank you for the opportunity to be of service. Should you have any questions, please contact us at (805) 520-0831.

Respectfully submitted,



Exp 6/30/10

Frank J. Kenton,
CA Certified Engineering Geologist CEG 1254

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Appendix A

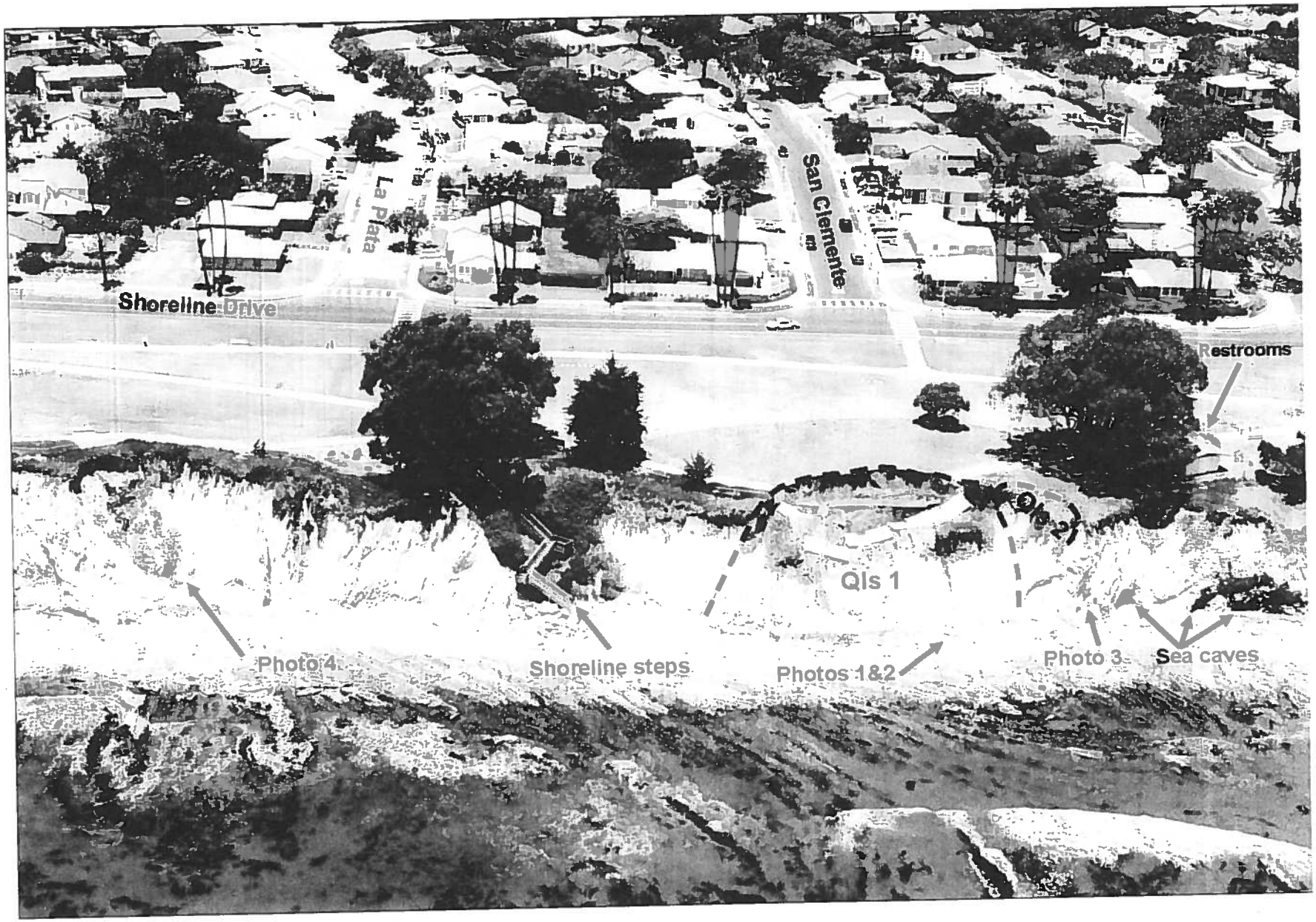
Shoreline Drive
La Plata
San Clemente
Restrooms
Qls 1
Photo 4
Shoreline steps
Photos 1&2
Photo 3
Sea caves

Photo 1 The active 2008 landslide viewed from the toe. 2/3/08

Photo 2 Continued movement and erosion of the 2008 active landslide. 10/15/08

Photo 3 Differential erosion of weaker beds adjacent to east flank of the landslide. 10/15/08

Photo 4 Sea cliff west of shoreline steps where an earlier landslide occurred and slide material has been eroded. 10/16/08

Appendix B

REFERENCES

Bezore, S. and Wills, C.J., 2000, Landslide Hazard Maps of Southeastern Santa Barbara County, California: California Department of Mines and Geology, DMG Open-File Report 99-12.

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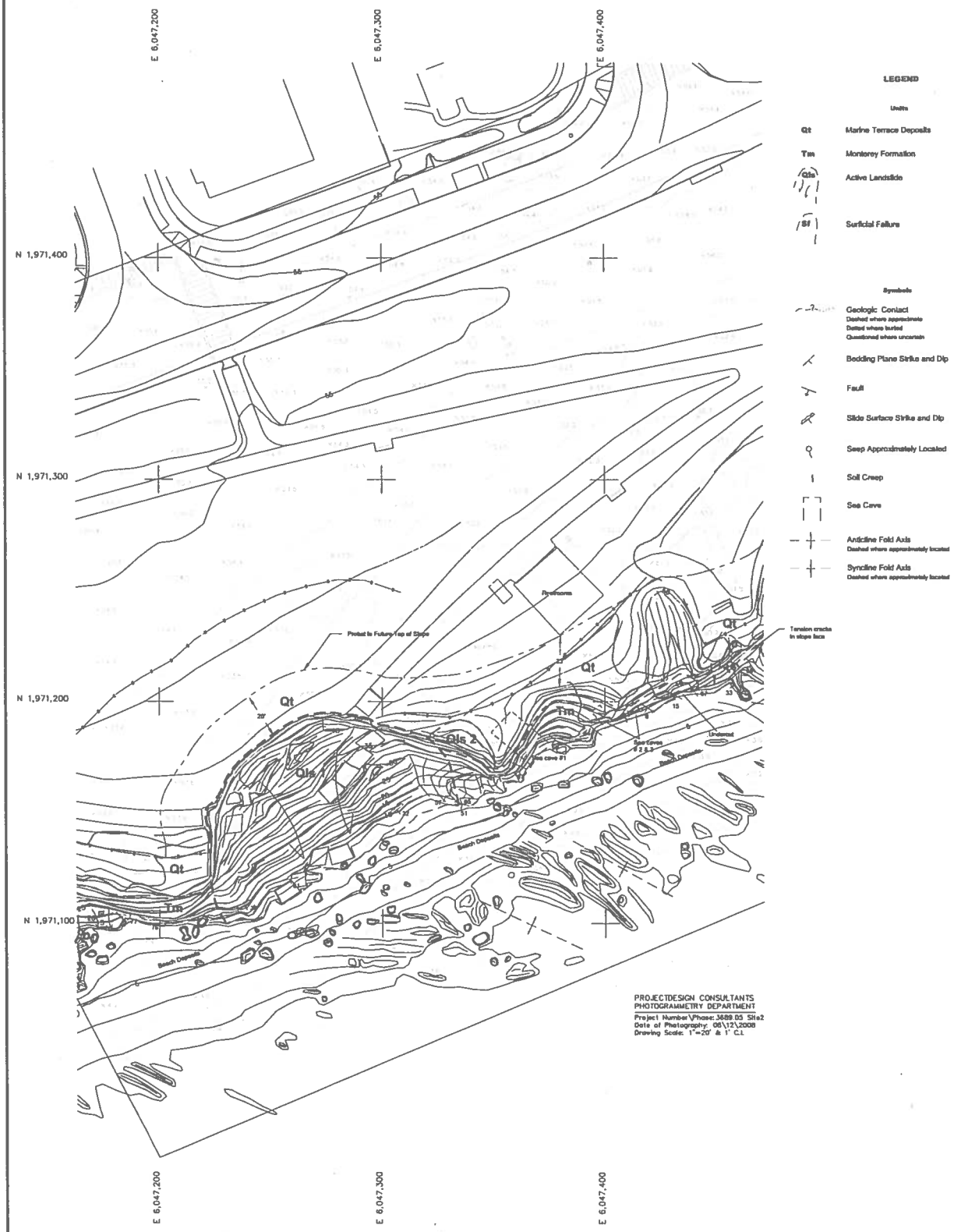
Norris, Robert M., June 1968, Sea Cliff Retreat Near Santa Barbara, California: Mineral Information Service, Vol. 21 No. 6, pp 87-91.

Norris, Robert M., August 1990, Sea Cliff Erosion: A Major Dilemma: California Geology, pp 171-177.

Norris, Robert M. and Webb, Robert W., 1976, Geology of California: New York, John Wiley & Sons, Inc., pp 243.

Interpretations limited to those discussed in text of report



FRANK J. KENTON **250 EAST EASY STREET** **SIMI VALLEY, CA 93065**	**GEOLOGIC MAP** **SHORELINE PARK LANDSLIDE** **SANTA BARBARA, CALIFORNIA**	**PLATE** **1**

Frank J. Kenton

250 East Easy Street #6 • Simi Valley, California U.S.A. 93065

June 10, 2011

Ms. Janice M. Hubbell, AICP
Parks Project Manager
Parks and Recreation Department
City of Santa Barbara
P.O. Box 1990
Santa Barbara, CA 93102

SUBJECT: Engineering Geologic Update of the 2008 Active Landslide Shoreline Park, Santa Barbara, California.

Reference: Engineering Geologic Report of the 2008 Active Landslide Shoreline Park, Santa Barbara, California, dated February 26, 2009.

INTRODUCTION

This engineering geologic update was prepared to provide supplemental discussion relative to review questions raised during the Park Department planning process. Geologic observations on March 15, 2011 were included as part of this update. Since the preparation of the February 26, 2009 engineering geologic report, erosion of the 2008 active landslide and adjacent areas has continued. Large blocks of slide debris have moved downslope and have been removed by wave erosion. The near vertical landslide head scarp is now clearly visible from the beach. Slippage in the area, previously mapped as Qls 2, is continuing. In this area, there are noticeable differences in the slope and vegetation. Four photographs are included with this update for reference. Photo 1 shows the active landslide on February 3, 2008. Photo 2 taken in a similar orientation shows the active landslide March 15, 2011 after wave erosion has removed landslide debris. Photo 3 shows the landslide on October 15, 2008. Photo 4 taken in a similar orientation shows the landslide on March 15, 2011, and illustrates slope slippage with changed vegetation patterns.

2008 ACTIVE LANDSLIDE DISCUSSION

The 2008 active landslide is still active below the park. Wave erosion has removed a significant portion of the landslide debris. The remaining debris will continue downslope movement as the toe area continues to be undercut and eroded. The near vertical slide scarp is forming the new sea cliff. Material perched above the slide plane is still considered hazardous. However, this area is not within the park use area.

Phone: (805) 520-0831 Fax: (805) 520-0838

At the time of site observations, there were no observable signs of ground cracking indicating that the 2008 slide scarp is moving further into the park. Slippage and erosion is continuing along the east side of the landslide and steep slopes that are by the sea caves. Slippage in this area includes the previously mapped slide area Qls 2. Earth movement is anticipated to continue.

The restrooms are located upslope from this area. Observed slippage appeared to be shallow and is far enough away from the restrooms to not adversely impact them at this time. No obvious signs of incipient earth movement were observed around the restrooms. Visual monitoring of the area by park staff should continue as previously discussed. Restroom operation should continue until sea cliff retreat advances closer to the Probable Future Top of Slope. Any changed conditions should be reviewed by an engineering geologist.

PROBABLE FUTURE TOP OF SLOPE

As part of the earlier geologic site evaluation, a Probable Future Top of Slope was identified on the geologic map. This line was determined to answer the 2008 question about where the top of slope might be based on the next potential failure. The Probable Future Top of Slope is based on geologic mapping of the sea cliffs. Bedding plane orientation, geologic structure, rock composition, and coastal erosion processes were considered when determining the Probable Future Top of Slope. In the 2008 active landslide area, the Probable Future Top of Slope is based on the upslope projection of the landslide slip surface attitudes available during 2008 geologic mapping. The 2008 Probable Future Top of Slope, as previously identified, should be used in the Park planning process. Due to changing geologic conditions in the sea cliff, the line varies in distance from the sea cliff edge. This line is not a 75-year setback line.

FENCE LOCATION

The sea cliffs at Shoreline Park are natural and in a natural active coastal process environment. These natural processes will occur at different rates along the sea cliff. The location of the fence at the top of the sea cliff is an operation policy decision that cannot be solely made be an engineering geologist. The proposed location of the fence, which is at least 25 feet from the Probable Future Top of Slope, should be adequate for any future site conditions.

REMARKS

The conclusions contained herein are based upon findings and observations made from geologic interpretation of surface observations and review of available in-house documents. Subsurface exploration is necessary to determine the conditions at depth.

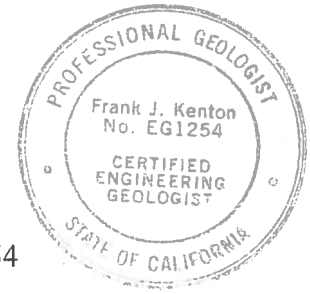
This report is issued for planning purposes. Site conditions will change over time. Future engineering geologic observations will be required.

The scope of our services did not include any environmental assessment or investigation of the presence or absence of hazardous materials or toxic materials in the soil, surface water, groundwater or air, on below or around the site.

This report has been compiled for the exclusive use of the City of Santa Barbara, its agents, or its representatives. It shall not be transferred to or used by other parties, or applied to any project in this study area other than as described herein, without consent and/or thorough review by Frank J. Kenton.

Thank you for the opportunity to be of service. Should you have any questions, please contact us at (805) 520-0831.

Respectfully submitted,



Frank J. Kenton,
CA Certified Engineering Geologist CEG 1254

FJK/lk
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Attachment: Photographs

Attachment

Photo 1 The 2008 active landslide looking west. 2/3/08

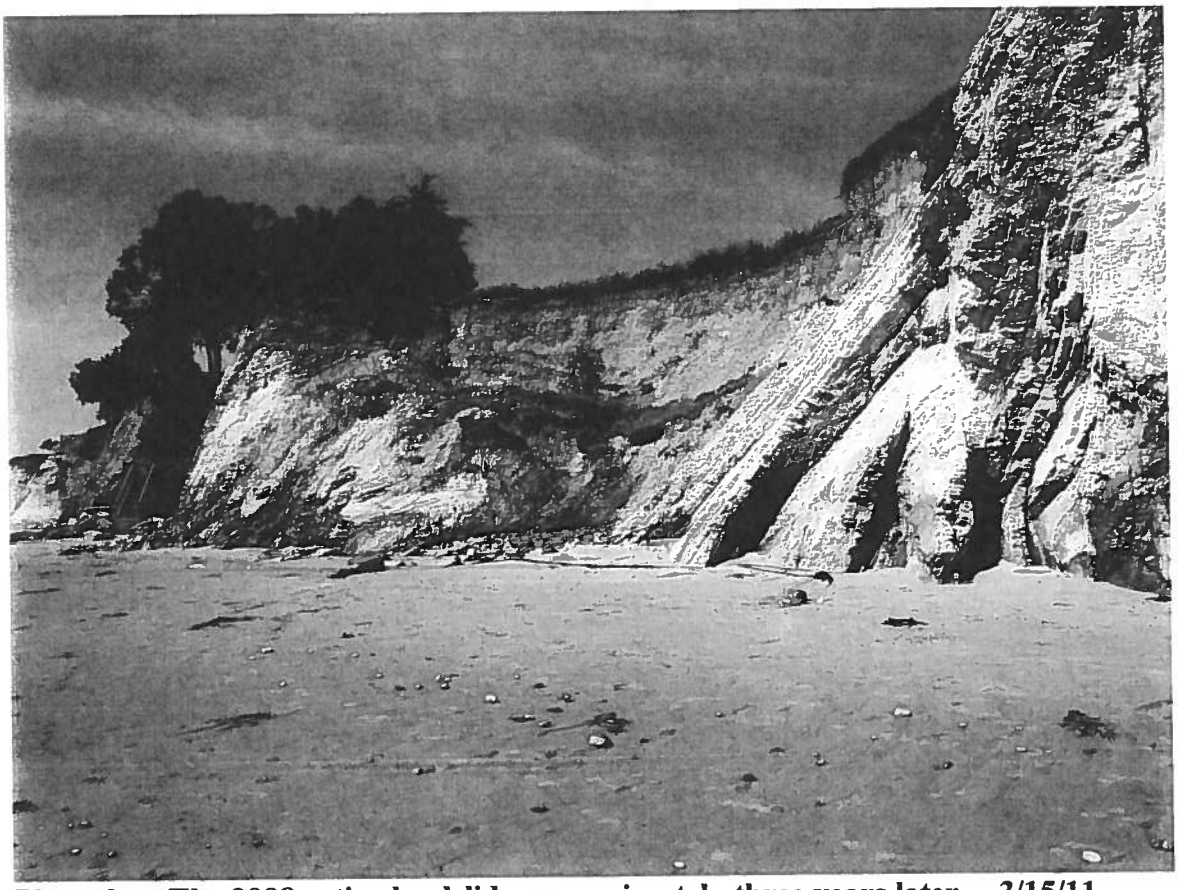


Photo 2 The 2008 active landslide approximately three years later. 3/15/11

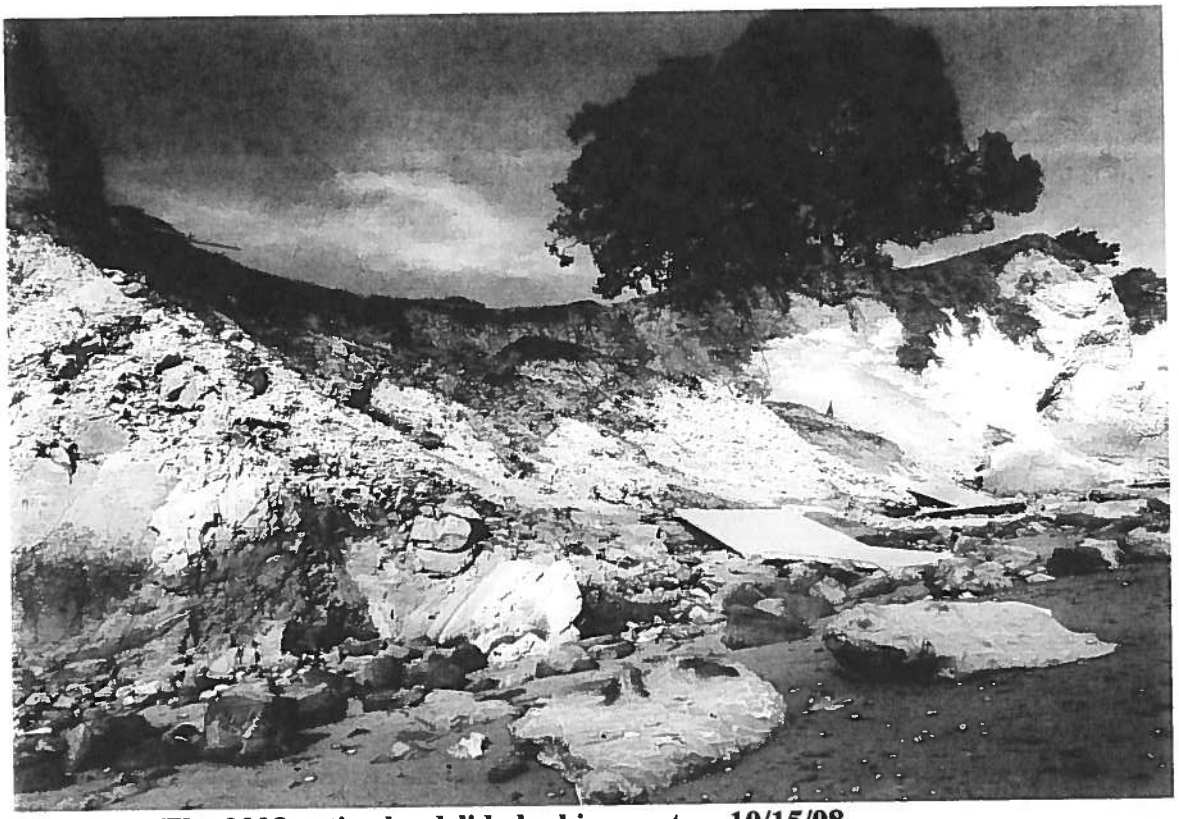


Photo 3 The 2008 active landslide looking east. 10/15/08

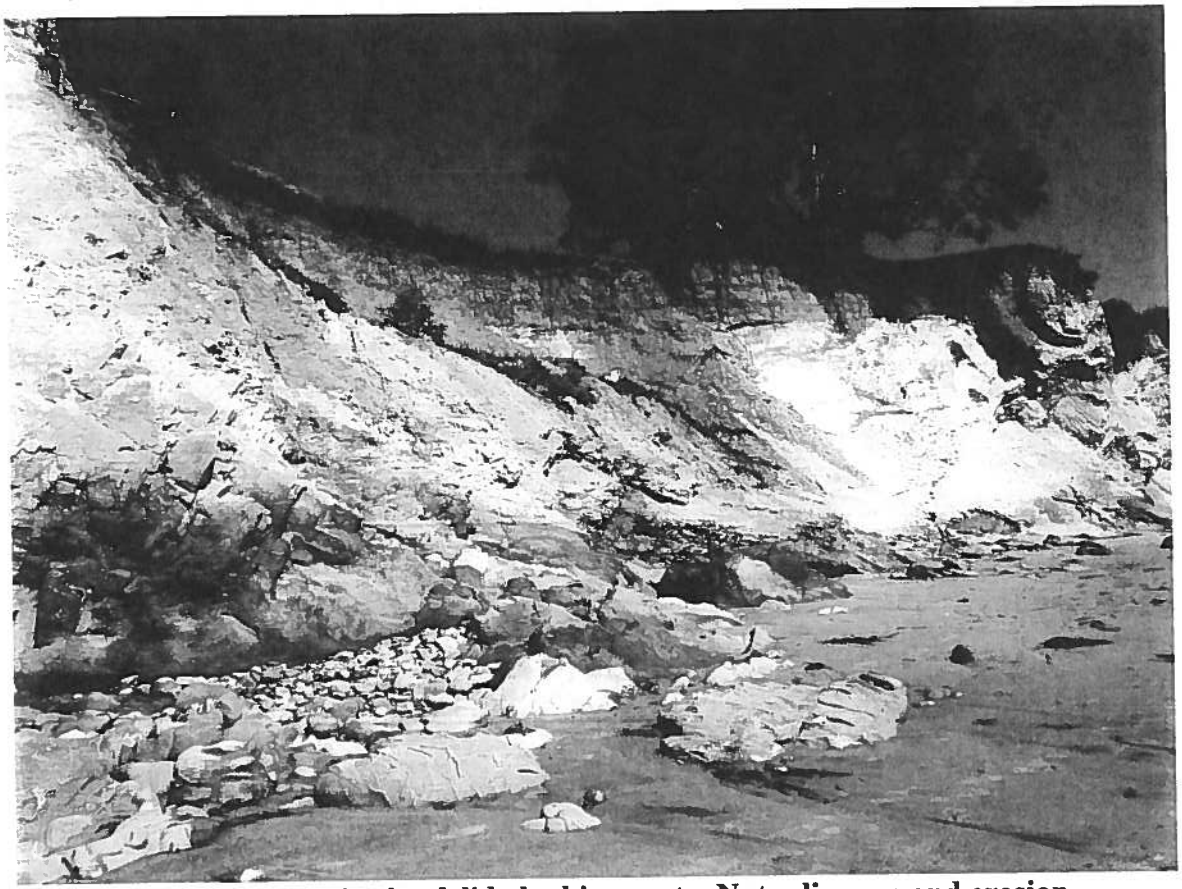


Photo 4 The 2008 active landslide looking east. Note slippage and erosion differences. 3/15/11

Frank J. Kenton

250 East Easy Street #6 • Simi Valley, California U.S.A. 93065

February 26, 2009

Ms. Jill Zachary
Assistant Parks and Recreation Director
City of Santa Barbara
620 Laguna Street
P.O. Box 1990
Santa Barbara, CA 93102

SUBJECT: Engineering Geologic Report of MacGillivray Point, Shoreline Park, Santa Barbara, California.

INTRODUCTION

This report presents engineering geologic observations of MacGillivray Point, Shoreline Park, Santa Barbara, California. The point has an arched shape sandstone wall close to the slope edge, and several park benches. This wall is developing extension cracks on both sides that are sub parallel to the sea cliff, which is cut further into the bluff on both sides. The south end of the lookout is within 2-3 feet of the sea cliff at the closest point.

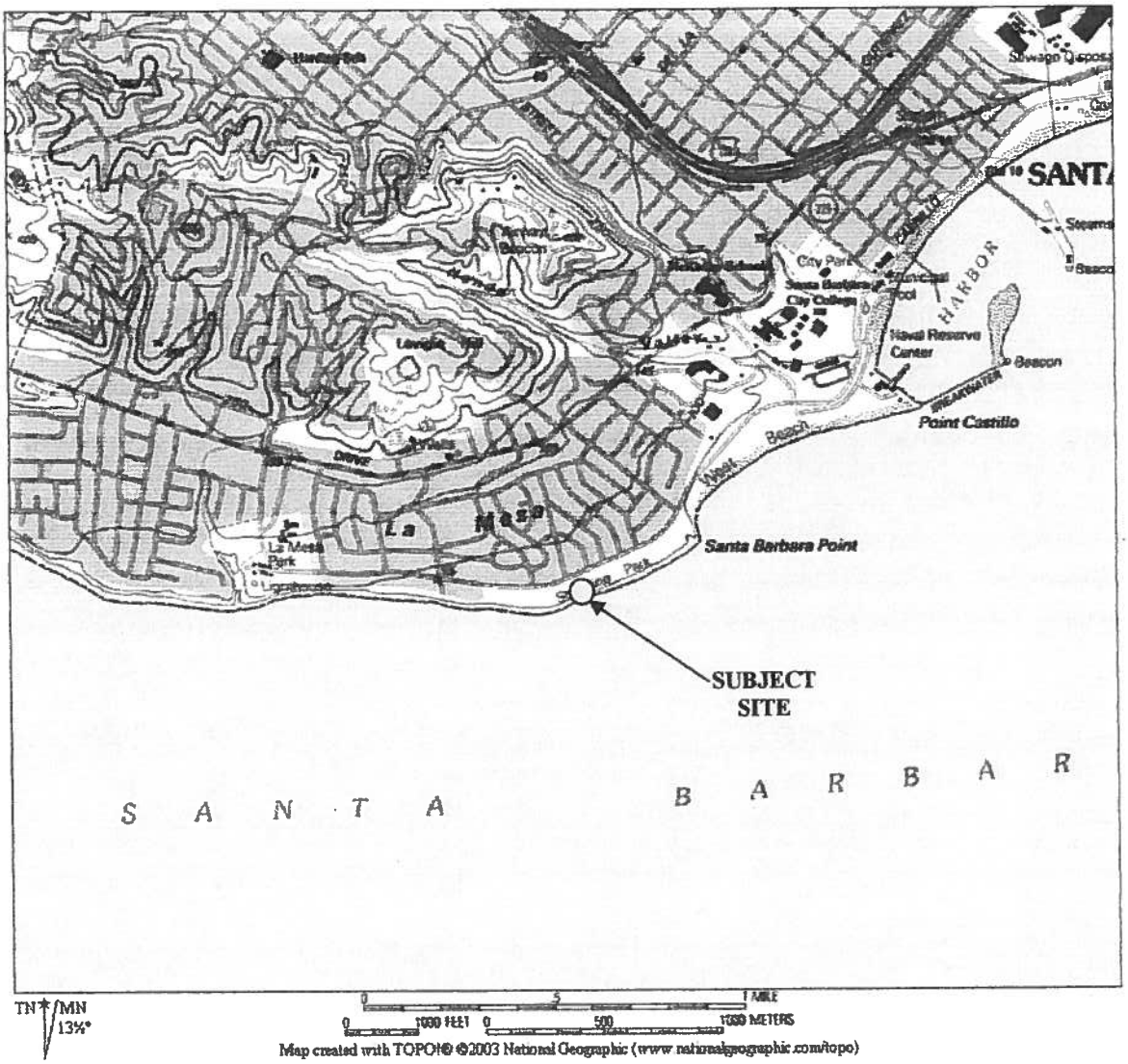
Active landslide movement occurring on the park slopes descending to the beach is part of natural geologic processes associated with sea cliff erosion. As a result, park use will change over time. This report presents engineering geologic observation and presents a Probable Future Top of Slope to be considered in current park use. Present and future sea cliff erosion keeps the sea cliff in a dynamic changing condition. As slope conditions change significantly, future engineering geologic evaluations will likely be needed. Changed conditions will also necessitate revisions in the Probable Future Top of Slope.

Accompanying Figure Plate and Attachment:

Phone: (805) 520-0831 Fax: (805) 520-0838

EXHIBIT G

LOCATION MAP



Shoreline Park MacGillivray Point
City of Santa Barbara Parks and Recreation
Santa Barbara, California

Figure 1

SITE DESCRIPTIONS

Shoreline Park is a long narrow parcel that is located between Shoreline Drive on the north and the ocean on the south. La Marina Drive is near the east park boundary and San Rafael Avenue is near the west park boundary. This popular park provides panoramic views of the beach, harbor, and Channel Islands.

MacGillivray Point is in the west half of the park and is located about 600 feet west of the Shoreline steps. It is a prominent view point along this section of the park. A low arched shape sandstone wall circles the bluff near top of slope. Two park benches are positioned to provide ocean and coastal views.

The stone wall is approximately 2 to 3 feet from the top of slope at the south side of the arch. The viewing area has approximately 57 feet of topographic relief from the park benches to mean sea level. Descending slopes are natural and subject to the coastal erosion processes. As a result, theses slopes are near vertical with bedrock and overlying terrace deposits exposed.

Access to MacGillivray Point is via a concrete path that parallels the shoreline. A picnic area is north of the path and immediately east of MacGillivray Point. Park surfaces are gently sloping in a southeast direction toward the ocean, with an approximate 4.5 foot elevation drop from Shoreline Drive to MacGillivray Point.

The arched shape stone wall is developing cracks that step toward the ocean. Approximate crack locations are plotted on the geologic map, Plate 1, and discussed in more detail in following report sections. MacGillivray Point is currently closed to public access.

Figure 1 presents the site location on a U.S.G.S. topographic base map. Appendix A presents an oblique aerial and six site specific photographs for reference.

GEOLOGIC CONDITIONS

Geologic Setting

Shoreline Park is located along a part of the Santa Barbara Coastline that lies within the Transverse Ranges geomorphic province. The park is within the La Mesa portion of the Santa Barbara fold belt. Shoreline Park is underlain by Monterey Formation bedrock and is overlain by unconformable younger age terrace deposits (Hoover 1978, Dibblee 1986, Minor, et al. 2006).

Earth Units

Marine Terrace Deposits (Qt) underlie the park, and are upper Pleistocene in age. Its basal contact is unconformable with the underlying bedrock. The terrace deposits are brown to gray, crudely bedded and moderately consolidated. These deposits consist of sand, silty sand, clayey sand and some gravel beds. A gravel layer that contains cobbles is found at the basal contact. The surface of the terrace deposits have been reworked by human activities. Artificial fill material may overlay the terrace deposits.

Within the subject site, this fill material is anticipated to be relatively thin and has not been differentiated as a separate unit for this geologic study.

Monterey Formation (Tm) bedrock underlies the site. It is light color and composed of siliceous, calcareous, and phosphatic mudstone and shale. This area has been identified to be middle and lower Miocene in age, and the lower unit of the Monterey Formation, by Minor et al. in U.S.G.S. Open File Report 02-136, 2006.

Beds within the formation vary from moderately hard to very hard. Thin, weaker, and often clayey beds occur between these hard beds. Clay interbeds ranging in thickness up to approximately 4 inches are found throughout this section. A parallel set of these clay beds can be observed in the sea cave west of MacGillivray Point. Erosion along these clay beds may be influencing sea cave development there. Similar clay beds are also underlying MacGillivray Point. These softer beds with weaker material strengths are influencing erosion and slope stability in this area. Also, groundwater seepage was observed to be occurring along these beds at various locations within the map area.

An anticlinal and synclinal fold underlies a portion of MacGillivray Point. The folds are striking to the Northwest. Bedding planes, associated with anticline, were observed to be striking to the Northwest and dipping 22 to 43 degrees to the Southwest, and striking to the Northwest and dipping 55 degrees to the Northeast.

A minor fault was mapped east of the sea cave. This fault is striking to the Northwest and dipping 84 degrees to the Northeast. This fault is considered to be localized within that stratigraphic section. No known active or potentially active faults have been mapped through the subject site. The closest potentially active fault near the site is the Lavigia Fault. The Lavigia Fault extends from the Hope Ranch area, crosses La Mesa north of the subject site, and continues out to sea, north of Santa Barbara Point. Seismic analysis for the subject site is beyond the scope of the authorized work.

Earth Movement

Currently, no obvious deep-seated landslides were observed. Bedding planes, or components of bedding planes, are adversely orientated relative to slope stability. The MacGillivray Point sandstone wall is cracking. This arched shape wall surrounds the point to the east, west and south. The west facing wall has two well-developed cracks that have 1/2 and 1/8 inches of separation. The east facing wall has three cracks that have 1/8, 1/4, and 1/16 inches of separation. Theses cracks are aligned sub parallel to the slope face which is cut further back from the point on both sides. Wall cracks, combined with underlying adversely orientated bedding planes downslope, raises concerns about site stability. These combined features suggest potential landslide movement and downslope creep. A failure at this location has the potential to develop quickly due to topographic configuration. The geologic map shows a Potential Future Landslide Area for MacGillivray Point.

Surficial failures (Sf) are occurring along the sea cliffs. Often, this material falls leaving only the outline of the failure with all material gone. The geologic map shows areas where this material is creeping on the slope or accumulated on the slope face. In general, steep slope gradients, combined with bedrock composition, do not easily form soil profiles on the slope. Where vegetation growth or a thin soil profile is present this most likely represents

material transported downslope from a shallow failure.

General areas of soil creep, surficial failure and erosion are shown on the geologic map with a wavy line symbol.

Groundwater

Seeps are occurring in the sea cliffs. The terrace deposits are more permeable than many bedrock beds. It is possible that ground water migration is occurring along the terrace deposits basal contact. However, no well-developed seeps were observed where the terrace deposits daylight on the sea cliff. The seeps appear to be influenced by bedrock composition, joints, fractures, and bedding planes. The ground water appears to be perched on clay beds at several locations within the map area. Several seeps may be associated with a particular bedding plane. General seep areas within the map limits are noted on the geologic map. Water quantities are sufficient for the growth of evaporate deposits at some locations.

The source of the ground water requires further definition. Seepage saturates the seacliff where it occurs. This surfacing ground water can weaken bedrock strengths and adversely impact clay beds. Seepage or surfacing groundwater promotes quicker weathering and slope slippage.

Potential sources for water include subsurface water flow from up gradient sources, irrigation, leaking water lines and leaking storm drain lines. Storm drain lines collect surface runoff water from Shoreline Drive and the surrounding Mesa neighborhood (421 acres), and outlet this water at the sea cliffs. No storm drain lines were within the map limits.

SEA CLIFF SETBACK

A Probable Future Top of Slope to be considered for current park use is presented on the geologic map included with this report. This line is identified on Plate 1 and dimensional from top of slope or the stone wall at MacGillivray Point. The Probable Future Top of Slope varies from 17 to 23 feet on either side of MacGillivray Point and 39 feet from the wall at MacGillivray Point. This Probable Future Top of Slope is for park use and not for construction of new buildings. The Probable Future Top of Slope is not a 75-year setback. Therefore, as slope conditions change significantly, future evaluations will likely be needed. Changed conditions also will necessitate revisions in the Probable Future Top of Slope.

Bedding plane orientation changes in the map area. There is a strong southwest dip which is adversely orientated to the point. True dip or dip components of these bedding planes are daylighting on the slope. Geologic structure changes under the point due to folding. The southwest dip resumes after the folds. Formation of the point appears to be influenced by hard bedrock layers that are more erosion resistant. However, softer and weaker clay is interbedded. These daylighted weak beds are landslide prone.

Small failures and erosion has resulted in the top of slope retreating at different rates. One location is within 2-3 feet of the MacGillivray Point stone wall. To the west another location is within 1.5 feet of the park fence and to the east another area is within 3 feet of the park fence. A 1:1 (horizontal to vertical) setback at the east and west locations was used

for the Probable Future Top of Slope. Park fencing can be placed within this setback, provided that the area is monitored.

CONCLUSIONS

1) Shoreline Park is an area of active Coastal Processes. These natural processes result in changed slope conditions over time. Slopes descending to the beach erode and move at different rates depending on area specific geologic conditions. Public interface with these natural processes needs to consider a range of park use options. These options include precluding public access, seasonal access, and monitoring of areas with use based upon the monitor data. Park use and risks assumed is a management decision. Geologic conclusions to assist in the management decision are provided below.

2) Based upon observed geologic conditions and stone wall cracking, MacGillivray Point has a potential for landslide movement. Monitoring of the walls is recommended to determine growth rate of these cracks. Monitoring methods best suited to park operation should be selected. Measurement reference points can be established on either side of the cracks with measurements obtained with a steel tape measure that is graduated in 32^{nd} of an inch can be used to determine relative crack movement. This method requires accurate repeatable measurements. All measurements should be recorded on a log sheet showing date, time, and person taking measurements. Alternatively, survey points can be established with repeated measurements taken over time that will show both horizontal and vertical movement. With this method, movement vectors can also be determined.

3) The length of time that crack monitoring should be performed is based upon the results of repeatable measurements at the same location. Initially, the readings should be taken weekly for the first month. Based upon the results, the frequency of measurement can be lengthened to every two weeks if little of no movement is found. After two months the monitoring schedule should be reevaluated based upon collected data.

4) A line representing the Probable Future Top of Slope is drawn on the geologic map. The Probable Future Top of Slope varies across the site. Plate 1 shows dimensions that range from 17 to 23 feet from the top of slope on either side of MacGillivray Point and 39 feet from the wall at MacGillivray Point. This line is based upon current site conditions. This is not a 75-year setback line for new building construction. The line represents a suggested setback for park use. As site conditions change, this area will require further revisions in the Probable Future Top of Slope.

5) Park fencing should be set back from top of slope. With monitoring, the park fence can be within the Probable Future Top of Slope. Due to sea cliff retreat, the existing fence is within 1.5 to 3 feet of the slope top at some locations. A shallow failure will undermine the fence in this area. The City of Santa Barbara Park Department needs to evaluate the risks involved with various locations and relocate the fence an appropriate distance from the top of slope. The Probable Future Top of Slope shown on Plate 1 restricts public access to MacGillivray Point.

6) MacGillivray Point should remain closed to public access until sufficient data is available about crack growth. The geologic map shows a Potential Future Landslide Area for MacGillivray Point.

REMARKS

The conclusions contained herein are based upon findings and observations made from geologic interpretation of surface observations and review of available in-house documents. Subsurface exploration is necessary to determine the conditions at depth.

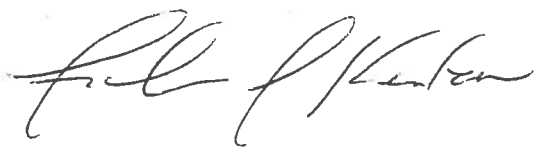
This report is issued for planning purposes. Site conditions will change over time. Future engineering geologic observations will be required.

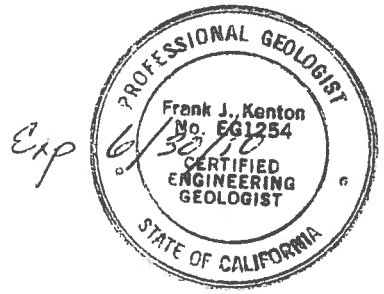
The scope of our services did not include any environmental assessment or investigation of the presence or absence of hazardous materials or toxic materials in the soil, surface water, groundwater or air, on below or around the site.

This report has been compiled for the exclusive use of the City of Santa Barbara, its agents, or its representatives. It shall not be transferred to or used by other parties, or applied to any project in this study area other than as described herein, without consent and/or thorough review by Frank J. Kenton.

Thank you for the opportunity to be of service. Should you have any questions, please contact us at (805) 520-0831.

Respectfully submitted,





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Frank J. Kenton,
CA Certified Engineering Geologist CEG 1254

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Appendix A

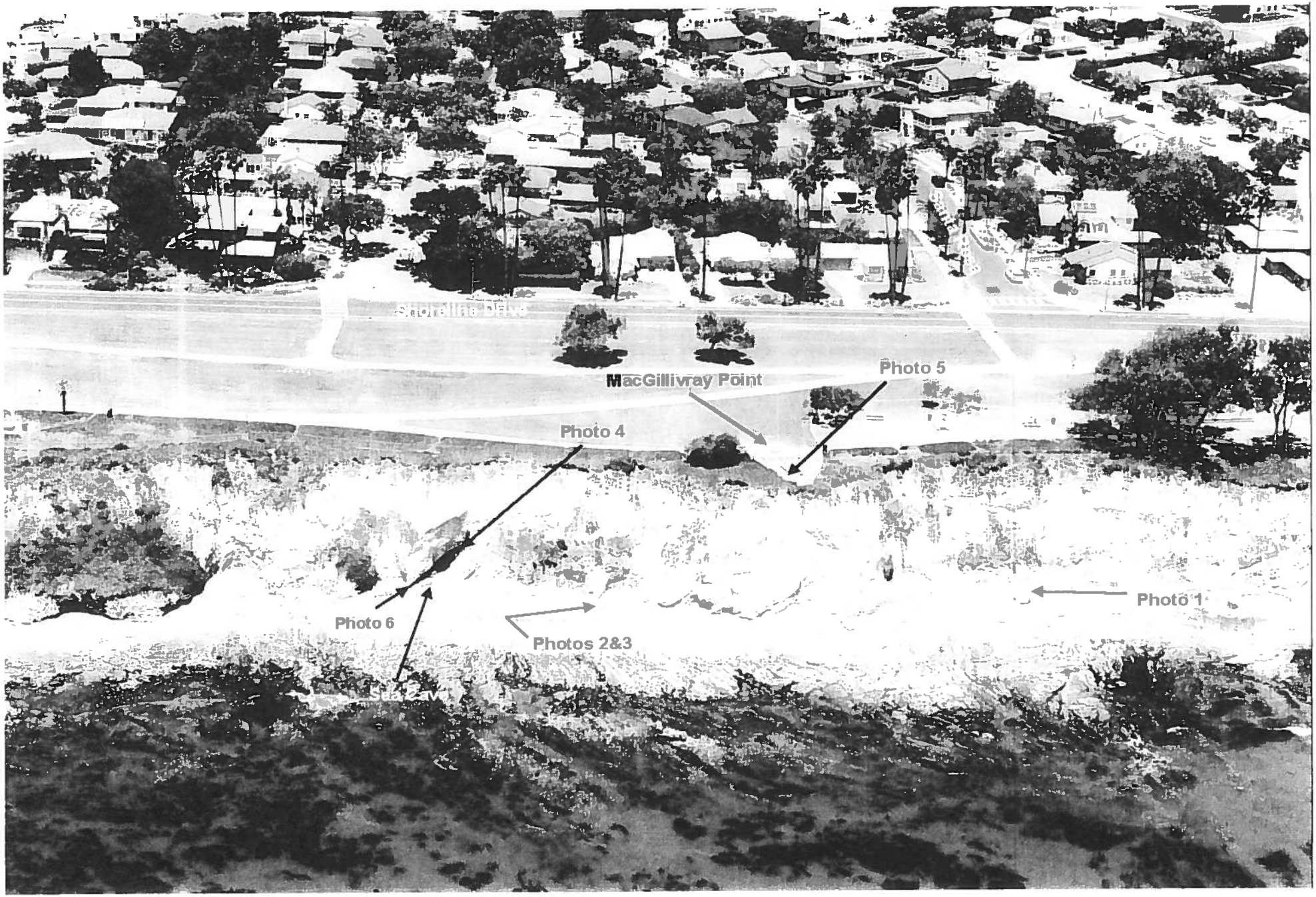
MacGillivray Point
Photo 5
Photo 4
Photo 6
Photos 2&3
Photo 1

Photo 1 East side of slope descending from MacGillivray Point. 10/16//08

Photo 2 West side of slope descending from MacGillivray Point. 10/25/08

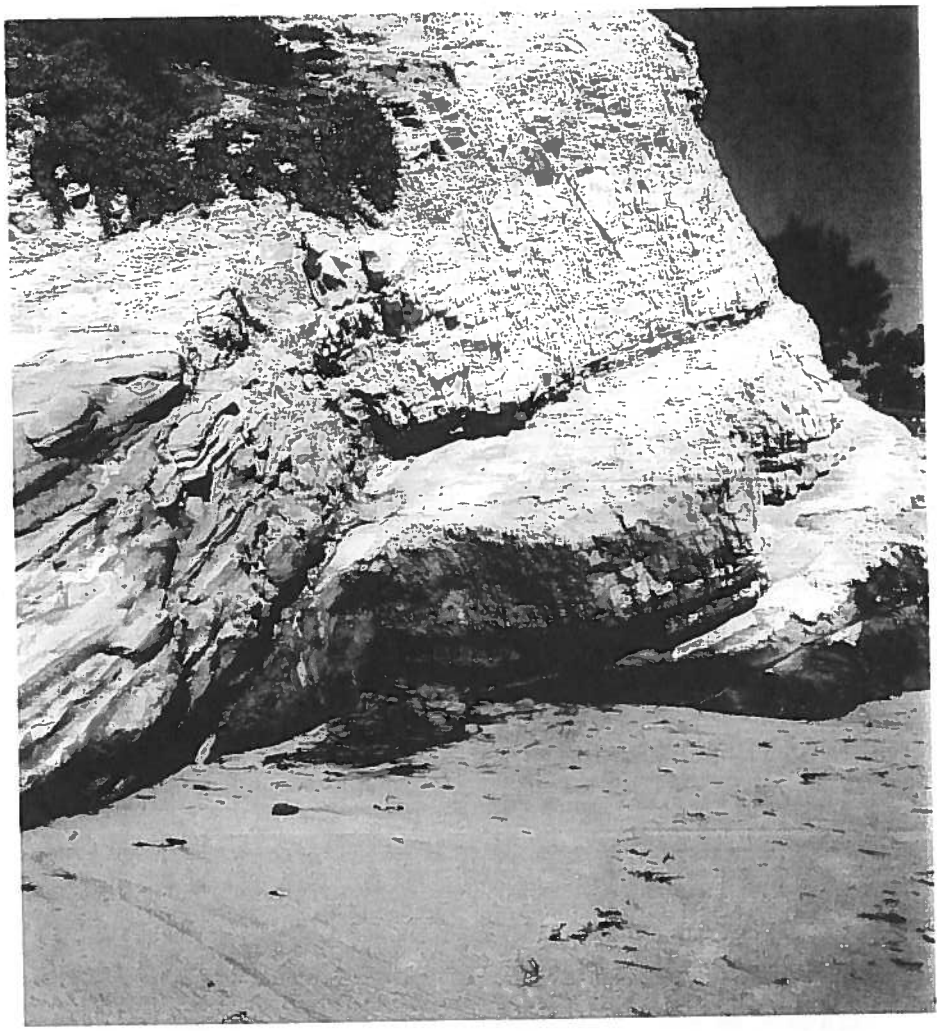

Photo 3
Close up view of Photo 2 soft clay beds are influencing slope erosion in this area. 10/16/08

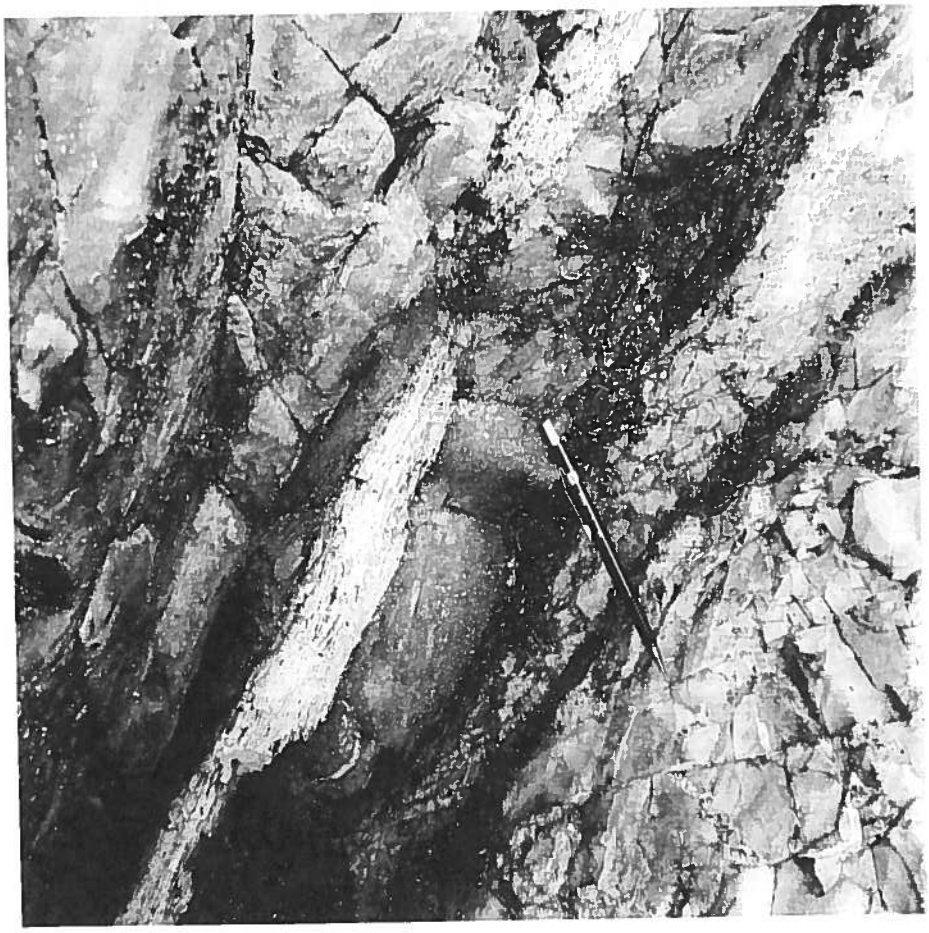

Photo 4
Close up view of clay beds in the Monterey Formation. 10/15/08

Photo 5 **Crack in the stone wall at MacGillivray Point. 10/15/08**

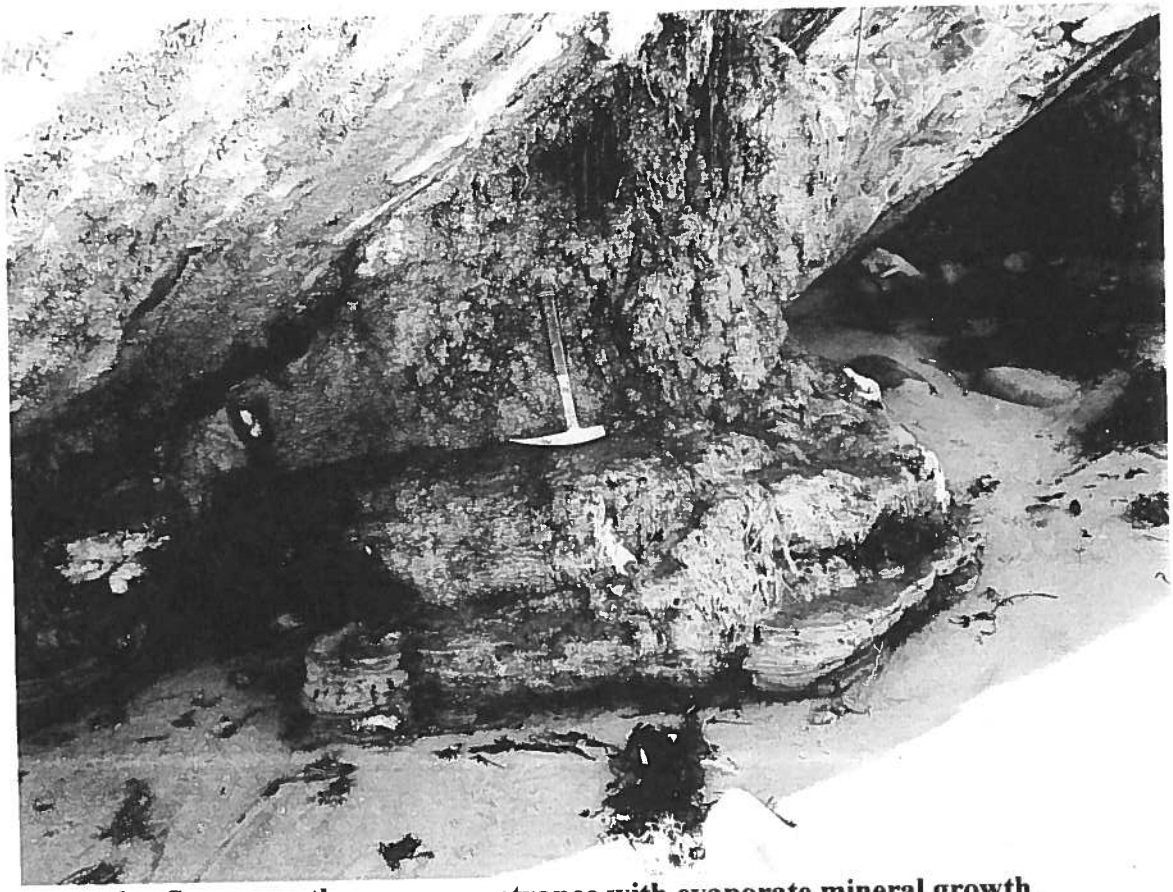

Photo 6 **Seep near the sea cave entrance with evaporate mineral growth. 10/16/08**

Appendix B

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FRANK J. KENTON **250 EAST EASY STREET** **SIMI VALLEY, CA 93065**	**GEOLOGIC MAP** **MACGILLIVRAY POINT - SHORELINE PARK** **SANTA BARBARA, CALIFORNIA**	**PLATE** **1**

Frank J. Kenton

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June 10, 2011

Ms. Janice M. Hubbell, AICP
Parks Project Manager
Parks and Recreation Department
City of Santa Barbara
P.O. Box 1990
Santa Barbara, CA 93102

SUBJECT: Engineering Geologic Update of MacGillivray Point Shoreline Park, Santa Barbara, California.

Reference: Engineering Geologic Report of MacGillivray Point Shoreline Park, Santa Barbara, California, dated February 26, 2009.

INTRODUCTION

This engineering geologic update was prepared to provide supplemental discussion relative to review questions raised during the Park Department planning process. Geologic observations on March 15, 2011 were included as part of this update. The purpose of this update is to review MacGillivray Point to determine if the Point can be opened to the public or remain closed.

MACGILLIVRAY POINT DISCUSSION

Since the preparation of the February 26, 2009 Engineering Geologic Report, MacGillivray Point has been closed to the public due to adversely oriented geologic conditions observed in the underlying near vertical sea cliff, and stone wall cracks that suggest possible landslide movement. Survey monitoring of this area started on March 8, 2011.

As part of the earlier geologic site evaluation, a Probable Future Top of Slope was identified on the geologic map. This line was determined to answer the 2008 question where the top of slope might be based on the next potential failure. The Probable Future Top of Slope is based on geologic mapping of the sea cliffs. Bedding plane orientation, geologic structure, rock composition, and coastal erosion processes were considered when determining the Probable Future Top of Slope. The 2008 Probable Future Top of Slope, as previously identified, should be used in the Park planning process. Due to changing geologic conditions in the sea cliff, the line varies in distance from the sea cliff edge. This line is not a 75-year setback line.

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The presence of unsupported soft clay interbedded with harder rock is adversely influencing slope stability of MacGillivray Point. The stepped erosion surfaces at the base of the sea cliff are related to clay beds located there. These clay beds erode easier, have weaker material strength when saturated, and are potential slip surfaces for future movement. Future earth movement along these clay beds is anticipated. Because these beds are daylighting in the sea cliff face, this future movement has the potential to occur quickly. The exact movement rate or time of occurrence is difficult to predict. Potential slope movement may not be dependent on seasonal conditions and may occur at any time.

Survey monitoring points have been established on the stone wall on either side of cracks, on the footing outside of the wall at the point, and on a plaque located on the front of the wall. Survey monitoring began on March 2, 2011, and is continuing. The survey data from March 8, 2011 through May 24, 2011 was reviewed as part of this engineering geology update. There have been some reported differences at specific survey points. However, these differences may be within the reading accuracy tolerance. While these three months of readings have shown no movement along an azimuth, more time is required. The time between readings can be longer, but should not stop. Engineering geologic findings submitted in 2008 remain valid.

If this area is to be permanently closed to the public, the option of wall and stone paving removal exists. A future failure may result in the wall ending up as rubble on the beach. Removal of this material at that time can be difficult and costly. The stone wall and stone paving can be removed prior to a failure, and possibly be salvaged. Removal should not have an adverse impact to the current slope stability, provided the demolition does not cause concentrated surface water runoff over the slopes, and positive surface drainage away from the slope edges is established upon completion of the demolition. At the time of demolition, ground vibration from mechanical equipment should be minimized to reduce the potential of equipment induced slope creep or failure. The contractor performing the demolition work should be familiar with work at the top of a sea cliff, and use adequate methods and techniques for worker safety per regulatory agency requirements.

FENCE LOCATION

The sea cliffs at Shoreline Park are natural and in a natural active coastal process environment. These natural processes will occur at different rates along the sea cliff. The location of the fence at the top of the sea cliff is an operation policy decision that cannot be solely made be an engineering geologist.

REMARKS

The conclusions contained herein are based upon findings and observations made from geologic interpretation of surface observations and review of available in-house documents. Subsurface exploration is necessary to determine the conditions at depth.

This report is issued for planning purposes. Site conditions will change over time. Future engineering geologic observations will be required.

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CA Certified Engineering Geologist CEG 1254

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